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1 (Case called) 2 THE DEPUTY CLERK: Counsel, please state your 3 appearance for the record. 4 MS. RAVENER: Good morning, your Honor. Kimberly 5 Ravener, Matthew Hellman and Samuel Adelsberg for the 6 government. 7 THE COURT: Thank you. Good morning. 8 MR. HELLMAN: Good morning. 9 MR. ADELSBERG: Good morning. 10 MS. WERNER: Good morning, your Honor. Federal 11 Defenders of New York by Ariel Werner and Jonathan Marvinny for 12 Ethan Melzer, joined at counsel table by our paralegal Maria 13 Barkhurst. 14 THE COURT: Very good. 15 Thank you, counsel, for being here. We are here to conduct a Daubert hearing with respect to the proposed 16 testimony of Dr. Greenfield. Is there anything that either 17 18 party would like to raise with the Court before we begin with 19 that work, first counsel for the government? 20 MS. RAVENER: Nothing further, your Honor. 21 THE COURT: Thank you. 22 Counsel for defendant?

MS. WERNER: No, your Honor. Thank you.

THE COURT: Good. Thank you very much.

So, let's begin. Counsel for defendant, would you

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please call your witness?
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               MS. WERNER: Your Honor, the defense calls Dr. David
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      Greenfield.
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               THE COURT:
                          Thank you.
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               MS. WERNER: Your Honor, may I approach the podium?
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               THE COURT: Yes, you may.
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               MS. WERNER: And your Honor, may I remove my mask when
8
      questioning the witness?
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               THE COURT: Thank you. Yes, you may.
10
      DAVID GREENFIELD,
11
           called as a witness by the Defendant,
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           having been duly sworn, testified as follows:
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               THE DEPUTY CLERK: Please state your full name and
      spell your last name slowly for the record.
14
               THE WITNESS: My name is Dr. David Greenfield.
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               THE COURT: Thank you very much.
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Counsel, you can inquire.

DIRECT EXAMINATION

19 BY MS. WERNER:

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- 20 Q. Good morning, Dr. Greenfield.
- 21 A. Good morning.
- 22 | Q. What kind of doctor are you?
- 23 A. I'm a clinical psychologist.
- 24 | Q. What is clinical psychology?
  - A. Well, it is the study and practice of treating and

- 1 understanding human behavior but it's largely a clinical
- 2 discipline as well as an academic study of human behavior,
- 3 | thinking, and emotion.
- 4 | Q. Does that study of human behavior include a study of how
- 5 people relate to one another?
- 6 | A. Very much so. That's really the basis of it. Social
- 7 | interaction is the largest part of human interaction and human
- 8 behavior.
- 9 | Q. How long have you been a psychologist?
- 10 | A. I have been practicing as a licensed psychologist since
- 11 1986.
- 12 | Q. And where are you licensed to practice?
- 13 A. I'm licensed to practice in New York -- New York,
- 14 | Massachusetts, Connecticut, and I have a telemedicine license
- 15 | in Florida.
- 16 | Q. Do you currently practice?
- 17 | A. Yes, I do.
- 18 | Q. In what setting?
- 19 | A. Well, I practice actually all over the place because of
- 20 | COVID but largely in Connecticut, but I practice from a variety
- 21 of offices because some of what I do is through telemedicine
- 22 | now.
- 23 | Q. So you maintain a private practice?
- 24 A. Yes, it is a private office.
- 25 | Q. We will discuss this in greater depth in a few minutes but

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during your career as a psychologist, have you developed a professional speciality or focus?

- Α. Yes, I have.
- 4 Q. And what is that?
- 5 In the understanding of Internet behavior, as well as 6 treating Internet-related problems.
- 7 Where did you earn your psychology Ph.D, Dr. Greenfield?
- 8 Α. Texas Tech University.
- 9 What year was that? Q.
- 10 Α. 1986. '85, '86.
- 11 Did you write a dissertation or thesis?
- 12 Α. Yes, I did.
- 13 What is the topic? Q.
- 14 The topic was predicting marital satisfaction. Α.
- 15 Q. Did you conduct any sort of work or do work during graduate 16 school?
- 17 A. Well, yeah. About half of the time you are in school you 18 are treating patients in a clinic or in a hospital, which is
- what I did, in addition to internship and residency. 19

20 (Continued on next page)

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Greenfield - Direct

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BY MS. WERNER:

- What kind of schooling did you have prior to your Ph.D.? 2
- 3 I have a master's degree from -- I have a bachelor's degree
- from Ramapo College of New Jersey. I have a master's degree 4
- 5 from New York University, and I have additional postdoctoral
- 6 master's degree in pharmacology from Fairleigh Dickinson
- 7 University.
- What was the subject of your psychology bachelor's degree? 8
- 9 It was in general psychology. Α.
- 10 And your master's degree? Q.
- In psychology, particularly clinical counseling psychology. 11 Α.
- 12 What is counseling?
- 13 It's the -- it's the technique of providing a variety of Α.
- 14 methods to alleviate human suffering, basically, through
- techniques of psychotherapy: listening, cognitive behavioral 15
- strategies, sometimes pharmacology as well. 16
- And when did you receive that additional training in 17
- 18 psychopharmacology?
- 19 I completed it in 2017. Yeah, 2017. Α.
- 20 What is psychopharmacology? 0.
- 21 It's the study and use of psychoactive substances in the
- 22 field of psychiatry.
- 23 Did your academic training include training on research
- 24 methodology?
- 25 Yes, it did. Α.

- 1 | Q. What kind of training?
- 2 A. There were four or five courses in statistical analysis,
- 3 research methods, research design, and that's both at the
- 4 | master's and doctoral level as well as the undergraduate level.
- Q. Did that training include the performance of research using
- 6 | surveys?
- 7 A. Absolutely.
- 8 Q. And did that training include the evaluation of surveys
- 9 | that were based on self-reporting?
- 10 A. The research courses really included the ability to design
- 11 | and critique studies of all sorts in behavioral science and,
- 12 | actually, in all medical science, because you needed to
- 13 understand how drug studies worked as well.
- 14 | Q. Did your training include training in how to draw
- 15 || conclusions and synthesize ideas based on clinical practice and
- 16 | work with patients?
- 17 A. Yes, very much so.
- 18 | Q. And did it include training in the use of case studies?
- 19 A. Yes, it did.
- 20 | O. What are case studies?
- 21 A. Case studies are research reports that are based on
- 22 | individual or groups of treatment experiences that are reported
- 23 | in the literature as case studies.
- 24 | Q. Did your training include the review of academic literature
- 25 conducted by others in order to inform your own understanding

Greenfield - Direct

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- and practice?
- Yeah, that's -- you have to understand the ability -- you 2
- 3 have to be able to critique and understand other people's
- research both in order to conduct your own as well as to 4
- 5 implement the results of other people's research.
- 6 After you graduated from your Ph.D. program, did you have
- 7 an internship?
- I did. I had an internship at --8 Α.
- 9 Where --Q.
- 10 Go ahead.
- 11 At McGuire V.A. Medical Center in Richmond, Virginia.
- 12 What was that internship in?
- 13 It was in general psychiatry, addiction medicine, and Α.
- 14 neurology.
- 15 Q. What sort of work did you do during your internship?
- Treatment of patients. I worked on a substance abuse 16
- 17 addictions unit. I also worked in the acute psychiatry unit as
- well as in the neurology outpatient clinic and performing 18
- 19 neurological and neuropsychological examinations.
- 20 Q. You're talking about psychiatry. Could you describe
- 21 briefly the relationship between psychology and psychiatry?
- 22 A. Well, they're obviously highly interrelated disciplines.
- 23 mean my degree is in psychology, but most of my clinical work
- 24 has been in psychiatric or general medical settings.
- 25 not unusual, because the professions are interrelated.

- 1 | Q. How would you --
- 2 A. And we do very similar things.
- 3 | Q. How would you define psychiatry?
- 4 A. The study and practice of addressing and treating human
- 5 behavior disorders.
- 6 Q. And so does your training as a psychologist prepare you to
- 7 work in a psychiatric setting as well?
- 8 A. Yes, it does.
  - Q. After your internship, did you have a residency?
- 10 | A. I did.

- 11 | Q. What was your residency in, and where was that?
- 12 | A. Part of it was completed at Virginia Commonwealth
- 13 University in a counseling service, and then I transferred to
- 14 | Fairfield Hills psychiatric hospital in Newtown, Connecticut,
- 15 | and worked there -- completed my residency and then stayed on
- 16 as a staff psychologist.
- 17 | Q. What kind of work did you do during your residencies?
- 18 A. I worked in the general psychiatry unit and acute
- 19 | psychiatry unit and some work in the addictions unit, and I
- 20 performed neuropsychiatric evaluations.
- 21 | Q. You started to say that you continued on at Fairfield
- 22 | Hills. What kind of work did you do after your residency?
- 23 | A. What I just said. I worked -- I continued in the general
- 24 psychiatry unit doing neuropsychiatric evaluations and also
- 25 covered some of the acute psychiatry unit. We would evaluate

for one year.

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- new patients coming in and then do routine evaluations, and then we also did psychotherapy with the patients that were suitable.
- Q. And where did you go from there?
- A. I left there and worked at a private psychiatric hospital for one year with adolescents. Elmcrest Psychiatric Institute,
- 8 | Q. What age range is adolescence?
  - A. I would say the ages at this facility were about 12 and 13 on the low end and all the way up to about 18.
    - Q. What did you do after you left Elmcrest?
- 12 A. Well, I went into full-time private practice. Prior to
  13 that I was already in part-time practice.
- 14 Q. You had started your private practice --
- 15 | A. Yes.
- 16 | Q. -- while you were still a staff psychologist?
- A. Yes, which is very common. People will work in hospitals, and then they will work part time in their private offices as
- 19 | well.
- Q. When you launched your private practice, did it have a specific topic focus, or was that a general private practice?
- 22 A. Well, initially, it was a general psychiatric practice
- working with a variety of problems and disorders that people
- 24 come in with, like depression and anxiety and a variety of
- 25 marital issues, relationship issues. But shortly after I

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- opened it, into the early '90s, I started to develop a specialty in the addiction field, which, with a more specific specialty in internet-related addiction issues.
- Q. Have you held any academic appointments in the years since your residency?
  - A. I have. I mean I have had numerous academic appointments, but the longest one I had was as assistant clinical professor of psychiatry at the University of Connecticut School of Medicine.
- Q. What were you teaching at the University of Connecticut School of Medicine?
  - A. Different things throughout the years. Initially, medical status examination to the med students and some of the residents. The latter part I taught behavioral addiction medicine, internet addiction, sexual medicine courses, and I supervised the psychiatry residents in their clinical care of their patients.
  - Q. What did that entail, the supervision?
  - A. Meeting with them once a week in my office. They would rotate through my office, and we would discuss their cases.
- Q. Would you advise them on best practices in working with patients and conducting research?
- A. Yes, I would.
- Q. How many years were you at the University of Connecticut
  School of Medicine?

- Α. 20 years.
- And what did you teach in some of your other academic 2
- 3 appointments prior to the University of Connecticut?
- 4 A. More general courses. I would say the internet addiction
- 5 courses were more at the University of Connecticut. The other
- 6 universities that I taught at, they were just general courses.
- 7 During your time in academia, were you also seeing patients
- 8 in your private practice?
- 9 Yes, I was. Α.
- 10 Do you hold any board certification, Dr. Greenfield?
- 11 I have a board certification in clinical psychology
- 12 from the American Board of Professional Psychology. I have a
- 13 board certification as a master addiction counselor from
- 14 NAADAC, and I have additional training and certification in
- 15 psychopharmacology.
- Are you a member of any professional associations? 16
- 17 Yes, I am. I'm a member of a lot. American Psychological,
- 18 Connecticut Psychological and Sexual Medicine Society, the
- American Society of Addiction Medicine. There's a bunch of 19
- 20 others. I don't remember all of them. National Register of
- 21 Health Service Providers, and a few others.
- 22 Q. Are your board certifications and professional association
- 23 memberships outlined on your CV?
- 24 Α. Yes, they are.
- 25 Have you served on any boards or committees? Q.

Greenfield - Direct

- A. Yes, I've served on a number of boards. The most recent
  board I'm serving on is the CATSO board, which stands for

  Connecticut Association for Treatment of Sex Offenders. So
  that is an organization that deals with people who get into
  trouble with regard to sexual behavior, much of which involves
  - Q. What other sorts of boards or committees have you served on?
  - A. I've served as the president of the Connecticut

    Psychological Association. I've served as a representative for
    the Joint Commission of accreditation of healthcare
    organizations and hospitals, and I've served as a liaison to
    various committees through the Connecticut State board.
    - Q. Thank you.

the internet.

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editorial board of any journal or publication in your field?

A. Yeah, I'm on about ten editorial boards, which basically means that you review articles when they send them to you and comment on articles if they ask your opinion.

Have you served during your career as a reviewer or on the

- Q. Have you yourself been published in such journals, peer-reviewed journals?
- 22 A. Yes, I have.
- Q. And you may have been starting to describe this, but what is the peer review process?
  - A. Well, just what it sounds like. You know, they will send

publishing it.

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- an article to one, two, or three doctors, who will review the
  article for its research methodology and thoroughness and
  writing style, and then they will critique that article and
  then give it a thumbs up or thumbs down for publication, or a
  publication with revision. So sometimes you'll make
  recommendations: if you correct this, then we would consider
  - Q. Will peer-reviewed academic journals publish any submission they receive?
  - A. No. That's the nature of -- peer-reviewed journals tend to be harder to publish in because they are critical and they have higher standards.
- Q. Approximately how many peer-reviewed journal articles have you written?
- 15 A. About ten.
- 16 Q. Are any of these on the topic of internet use and behavior?
- 17 | A. Yeah, most of them are.
- 18 | Q. Have you also contributed to chapters to academic books?
- 19 A. Yes, I have.
- Q. In these instances, did you volunteer to contribute chapters, or were you solicited to do so?
- A. No. In all -- in most of my writing, even the journal articles, I was requested or asked to publish the chapter or the article.
  - Q. Why was that, if you know?

- 1 A. Because I'm recognized as a leading expert in the field.
- 2 | Q. Did your book chapters that you contributed include
- 3 chapters on internet use and behavior?
- 4 A. Yes, they have.
- 5 | Q. Have you yourself published books?
- 6 A. Yes, I have.
- 7 | Q. How many?
- 8 A. Two, to date.
- 9 Q. And what was the subject matter of those books?
- 10 A. Internet use, internet behavior, and internet addiction.
- 11 | Q. And what was the first book title that you published?
- 12 A. Virtual Addiction.
- 13 | Q. And when was that published?
- 14 A. 1999, by New Harbinger.
- 15  $\parallel$  Q. And the second?
- 16 A. Overcoming Internet Addiction, published by Wiley.
- 17 | Q. Did you approach Wiley to write that book?
- 18 A. No. They approached me.
- 19 Q. And these two books, are these academic titles or popular
- 20 | titles?
- 21 A. No. These are books written for the layman. Although
- 22 | there's technical data in the books, it's really written to
- 23 help people and as a resource.
- 24 | Q. Have you been published in other forums besides these
- 25 peer-reviewed journals, books, and book chapters?

Greenfield - Direct

- 1 Yeah, I've been published in non-peer-reviewed settings as well, and I've also done about 150 professional presentations, 2 3 some of which -- many of which are invited. In fact, most of
- 4 them are invited.
- 5 Q. Going back to your non-peer-reviewed writing, did that writing include writing on internet use and behavior? 6
  - Yes, it did.

- 8 Q. And your presentations, you mentioned peer-reviewed 9 presentations. What does it mean for a --
- 10 A. Well, peer-reviewed presentation means that they've invited 11 you because of a specific area of expertise. Like, the 12 American Society of Child and Adolescent Psychology invited me 13 to speak at one of their conferences, so that's -- they'll ask
- you to speak because of your expertise. 14
- 15 Q. About how many peer-reviewed presentations have you given 16 during your career?
- 17 A. You know, 10 or 15. I don't really remember exactly, but --18
- 19 Q. Did those presentations include the subject matter of 20 internet use and behavior?
- 21 A. Yes, most of them.
- 22 Q. And have you been invited to deliver other oral
- 23 presentations, other than these peer-reviewed academic
- 24 presentations?
- 25 Yeah, about 150. I'm still invited pretty regularly to do

Greenfield - Direct

- 1 things.
- On the topic of internet use and behavior? 2
- 3 Yes, that's correct. The vast majority of my presentations
- are on that subject. 4
- 5 Q. Have you appeared or been quoted in the popular media as
- 6 well?
- 7 A. Yes, I've been quoted quite a bit. I don't really - I mean
- hundreds of times, but I don't know how many exactly. 8
- 9 Q. On what subject matter?
- Mainly on the issue of internet behavior, internet overuse, 10
- 11 internet addiction, sexual issues on the internet, video
- 12 gaming, chatrooming. Anything that has to do with internet
- 13 behavior.
- 14 What kind of outlets? Q.
- 15 Α. You're talking about -- I'm sorry.
- What kind of popular media outlets have you been quoted in 16
- 17 or --
- 18 A. Pretty much every major newspaper and magazine in the
- 19 country, most of the major talk shows, The New York Times. Ι
- 20 mean pretty -- there's pretty much nothing that's, that I
- 21 haven't been quoted in in some way or, you know, form.
- 22 Ο. Have you testified in court before?
- 23 Α. I have.
- 24 Have you testified in this courthouse before? 0.
- 25 It -- it sounds like I have. I know I have, but I don't Α.

- remember. I don't remember the courthouse, because it's been so long.
- Q. Did you testify in the case of *United States v. D'Amelio* in the Southern District of New York?
  - A. Yes, I did.
- 6 Q. Have you ever been precluded as an expert?
- 7 A. No, I have not.
- 8 Q. How long have you maintained your private clinical
- 9 practice?

- 10 A. Since about 1986, so it's 35, 36 years. 37 -- it's a long 11 time.
- 12 | Q. You started to discuss this a few minutes ago, but do you
- 13 have a general psychological clinical practice, specialized
- 14 | practice or both?
- 15 | A. Both.
- 16 | Q. Could you tell us more about that?
- 17 A. Well, you know, I actually have two websites. One
- 18 website's sort of geared toward the general psychiatric
- 19 community, and I will deal with a variety of issues, like
- 20 depression and anxiety and relationships and sometimes sexual
- 21 issues, often sexual issues. And then I have a specialty area,
- 22 which is internet behavior, internet addiction, and about 70
- 23 percent of my cases and people that come to see me are for
- 24 | internet-related issues. About 30 percent are general
- 25 psychiatric issues.

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Greenfield - Direct

- 1 Where are your private practices located?
- The main office is in west Hartford, Connecticut, but I do 2 Α. 3 do some telemedicine from other locations as well.
  - Do you ask your general psychological patients about the internet as well?
  - When you do a workup with a new patient, you ask them about all the things that might be contributing to their issues, and that would include substance use, internet use, gambling, other behavioral addictions, relationship issues; their medical history, of course, as well.
  - I don't expect you to have an exact number, but about how many patients, if you had to estimate, have you seen since 1986?
- 14 A. Oh, my God. It could be as high as 20,000. Somewhere between 10- and 20,000. 15
  - Q. Would that include patients in your residency and internship?
- 18 A. Yeah.
- 19 Focusing a little bit more specifically on your specialty 20 in internet use and behavior, you have testified about your 21 clinical work before. Earlier today you testified about your 22 clinical work. When did that become your primary area of focus? 23
  - It started to become the primary area of my focus I would say in the mid-'90s as people started to come in to my practice

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- complaining of issues related to the internet. I didn't start out or set out to become an expert in internet addiction. just sort of evolved over time, and that's what partially led to my doing research and writing about it, and then once you sort of become expected to be an expert, you then have to become an expert.
- Q. Did the internet exist in a form that was available to your average American when you began practicing as a --
- A. No, not really. No. I finished most of my medical training without the internet.
  - When did the internet come into mainstream use in the average American household?
- Early '90s. Α.
- 14 What was the focus of your research prior to that?
- 15 Well, I did research on marital satisfaction. I would say that that was the majority of my research early on. I did some 16 other studies on training, clinical training and methodology 17
- 18 for clinical training.
- 19 Did you have any focus on addiction prior to --
- 20 Yeah. I mean my subspecialty was always addiction 21 medicine, so that has always been a big part of my practice and 22 what I got one of my board certifications in.
- 23 When did your patients in your general practice start 24 talking to you about the internet and start bringing up the 25 internet in sessions?

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Greenfield - Direct

- A. In, I would say early to mid-1990s is when they started to show up and getting themselves into all different issues and circumstances that were -- involving the internet. This was when the internet was pretty new.
  - Q. Did those conversations inspire you to found your clinical practice that --
    - A. Yeah. At that time I founded the Center for Internet Studies, which was basically a research, training, and treatment center for issues related to the internet.
    - Q. Around what year did you form the Center for --
- 11 A. Mid 1990s, '95, '96. It's morphed since then.
- Q. Were your patients in your general practice reporting any behavioral dynamics that seemed particular to the online forum?
- 14 A. Very much so.
- Q. So is it fair to say that you've practiced as a psychologist for almost 40 years; more than 20 of them with a
- 17 | the focus on internet use and behavior?
- 18 A. Very much, yeah. Over -- probably close to 25 years.
- 19 Q. And over the last 25 years --
- 20 A. Let's not push 40 years. That sounds horrible.
- 21 Q. OK. 36.
- 22 | A. OK. That's better.
- Q. Over the last 25 or so years, since developing your specialty, around what percentage of your writing and public presentations have focused on the topic of internet use and

Greenfield - Direct

behavior?

- Oh, I would say 90-plus percent. I mean that's pretty much 2
- 3 at this point all I -- all I am -- all I speak about and write
- 4 about.

- 5 Q. Many of those writings and presentations have an emphasis
- 6 on internet abuse and addiction. Are you only an expert on
- 7 internet overuse?
- A. Well, you have to be an expert on internet behavior in 8
- 9 order to understand internet abuse just like in addiction
- 10 medicine and substance-based addictions, you have to understand
- 11 the substance in order to understand the abuse potential of
- 12 that substance, which would include the etiology, the behavior,
- 13 the pharmacology, the neurobiology. So I would say I'm an
- 14 expert in internet behavior and then the abuse within that
- 15 behavior, potential abuse, because not everybody abuses it.
- 16 People just use it? 0.
- 17 Many people use it. Most people overuse it.
- 18 Q. Are there commonalities of experience between your typical
- 19 internet user and those who are overusing it?
- 20 It's a matter of degree. Α.
- 21 Focusing in on this idea of addiction, have you specialized Q.
- 22 in addiction psychology throughout your career?
- 23 Α. Yes.
- 24 And have you ever taught addiction psychology and
- 25 psychiatry?

Greenfield - Direct

- 1 | A. Yes.
- 2 Q. Are there concepts from general addiction science that are
- 3 useful to this understanding of internet use and behavior more
- 4 | generally?
- 5 A. Yeah, the basic principles and etiology and neurobiology of
- 6 addiction are relevant to all substances and behaviors that
- 7 | have abuse potential. In fact, the American Society of
- 8 Addiction Medicine, which I'm a member of, talks about
- 9 | addictive substances and behaviors, and they all have the same
- 10 underlying neurobiology.
- 11 | Q. What is addiction?
- 12 A. It's the overuse of a substance or a behavior to a point
- 13 where there is deleterious impact and a change in emotion,
- 14 cognition, judgment, motivation, and can in some cases lead to
- 15 physical and psychological damage.
- 16 Q. How do you determine when a person is addicted to a
- 17 | substance or behavior?
- 18 A. Well, that's a -- that's an interesting question. I mean,
- 19 | ultimately, it's by the end-state impact on their lives. There
- 20 | are -- people have a misconception that addiction has to do
- 21 | with physiological tolerance and withdrawal, but that's not
- 22 | actually accurate, because that's only one aspect of addiction.
- 23 Addiction is a far more complex phenomena that involves
- 24 | behavior, memory, learning, patterns of motivation, and that's
- 25 | really what creates the negative impact in people's lives.

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- Q. Is there any kind of clear biological marker or indicator
  for --
  - A. There's really no -- there's no lab test or biological marker for addiction. Most of the time you note addiction based on lifestyle impact.
  - Q. So can you bring someone into a lab and get a clear ves-or-no test whether they're a cocaine addict?
  - A. No. The only -- you can do a lab test, you know, a drug detox, a drug-tox test that tells you whether there's cocaine in their system, but you cannot tell whether they're a cocaine addict.
  - Q. Is the same true of a gambling addict or a sex addict?
- A. Correct. Behavioral addictions and substance addictions are essentially the same thing from a neurobiological level.
  - Q. What part of the brain is implicated by addiction?
  - A. Well, it involves the whole brain, but the largest section of the brain that's involved is the limbic system, particularly structures like the striatum, the hippocampus, the amygdala, some aspects of the prefrontal cortex, the nucleus accumbens. These are the main structures that you see involved in reward circuitry. And reward circuitry has everything to do with motivation and the likelihood of repeating behaviors
  - Q. Can you flesh that out a little bit more and perhaps describe the evolutionary basis for this is understanding --

irrespective of negative impact.

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Greenfield - Direct

- A. Yeah, it's pretty interesting that, you know, the main neurochemical involved in reward and addiction is dopamine, and we evolved dopamine for really two basic reasons. It's to enhance the likelihood that we would experience pleasure from food and from procreation, which is one of the ways that we're -- we, and when I say we, I'm including animals, because animals have the same system that we do -- that you're likely to survive. So in a sense, the basic neurobiological system that's involved in addiction's really been hijacked by the substance or behavior that we now overuse to a point where it hurts us. So it piggybacks on those original survival neuro pathways that are dopaminergic or dopamine-based.
- 13 | O. And at a basic level --
  - A. Well, dopamine's a pleasure neurotransmitter. I'm sorry.
- 15 | It -- we wouldn't get out of bed without it.
- 16 | Q. Well, what does it do to our brains?
- A. Makes us feel good. I mean in small ways and in large
  ways, and it has everything to do with reward and everything to
- 19 do with the anticipation of reward.
- 20 | Q. This description you just gave us about evolutionary
- 21 | biology, is this generally accepted in the scientific
- 22 community, or did you just make that up?
- 23 A. No. This is generally accepted in -- I wish I had made it
- 24 | up, but --

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Q. And has the effect of dopamine on human behavior been

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Greenfield - Direct

- 1 studied or proven in a scientifically reliable manner?
- 2 Yes, very much so. Α.
  - How so? 0.

- 4 And we can look -- we can measure dopamine, not directly Α.
- 5 with an assay, but we can measure it through imaging studies.
- 6 We can see areas of brain that are lit up which are affected by
- 7 dopamine. So in internet studies and gambling studies and
- 8 substance-based studies, you can see areas of the brain that
- 9 light up dopaminergically in scan studies.
- 10 Q. Have those studies been done with the brain, dopamine, and
- 11 internet use?
- Very much so, yes. 12
- 13 Can you tell us how those studies work? 0.
- 14 Yeah. I mean, basically, there have been numerous studies, Α.
- 15 dozens. There have been meta-analytic studies, which a
- meta-analytic study is just basically a study that looks at a 16
- 17 bunch of studies all together and then sees if there's a
- 18 pattern between those studies and evaluates the methodology of
- 19 those studies. And essentially those, the most well-known
- 20 meta-analytic study found that internet behavior from a
- 21 neurobiological level, the scan studies look just like other
- 22 addictions. In fact, you can't tell the difference.
- 23 0. What does it look like?
- 24 It just lights up those circuits that are involved,
- 25 particularly the nucleus accumbens, which is just a tiny little

- 1 | thing in the limbic system, essentially in the midbrain.
- Q. In layman's terms, the use of the internet is lighting up
- 3 the nucleus accumbens --
- 4 A. Yeah. When I say lighting up, there's no lightbulb in your
- 5 | brain, but it's activating those neurons in that area.
- 6 Q. And this imaging can show the effect --
- 7 A. Correct.
- Q. So this imaging shows the effect of dopamine on the nucleus accumbens and on the limbic system generally?
- 10 A. Yes, it does.
- 11 | Q. Are these understandings of dopamine in the limbic system
- 12 generally accepted in the field of psychology and psychiatry?
- 13 A. Yes.
- 14 THE COURT: I'm sorry. Can you ask that question not
- 15 | in the aggregate. You asked psychology and psychiatry.
- 16 Dr. Greenfield is a clinical psychologist. Can you focus your
- 17 question, please.
- MS. WERNER: Yes, your Honor.
- 19 Q. This understanding of how dopamine affects the brain and
- 20 | specifically the nucleus accumbens, is this generally accepted
- 21 | in the field of clinical psychology?
- 22 A. Yes.
- 23 | Q. Is it also accepted in the field of psychiatry, where you
- 24 have practiced and taught for many years?
- 25 A. Yes.

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1 THE COURT: I'm sorry. Dr. Greenfield, you said you practiced in psychiatry. 2 3 THE WITNESS: Well, most of my work has been in 4 psychiatric facilities. THE COURT: As a psychiatrist? 5 6 THE WITNESS: No. 7 THE COURT: Thank you. 8 Go on. 9 BY MS. WERNER: 10 Q. Do only internet addicts experience the sensation of 11 pleasure or reward when dopamine hits their brain? 12 No. Everybody does. 13 So if a person who has never tried cocaine uses cocaine, 0. 14 will it affect their brain, the dopamine-recepting parts of 15 their brain? 16 A. Very much so. 17 Is the same true for a person who uses a slot machine at a 18 casino? 19 A. Yes. 20 And is the same true for a person who uses the internet? 21 Α. Yes. 22 Is there a specific test or threshold for determining when 23 an internet user is addicted or using in a compulsive manner? 24 A. Yeah, there are. There are a number of tests, some of

which I developed and a number of other psychologists and

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psychiatrists have developed them as well. There are some that are well standardized and considered the gold standard for evaluating whether somebody meets the criteria for internet addiction. But often, that's not the sole way you would evaluate whether a person has an addiction or not. There has to be a clinical evaluation of the patient to determine whether there are behavioral correlates in their life that meet those criteria.

- Q. What sort of behavioral correlates do you look for?
- A. Well, mainly changes in their major spheres of living, which would include social relationships, work, academic performance, physical health, motivation, self-care, academic pursuits. I think I said relationships, but if I didn't that
- Q. Are there people who use the internet but are not necessarily -- withdrawn.

Are people who use the internet but don't overuse it immune to the effects of dopamine in the nucleus accumbens and the brain more generally?

- A. Could you repeat that question, please?
- Q. Yes. Let me rephrase it.

would be very much included.

When someone uses the internet and they're not necessarily an internet addict, are they experiencing this dopaminergic effect in their brain that you have described?

25 A. I would believe so, yes.

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1 | Q. Does the dopaminergic --

THE COURT: Sorry.

What's the basis for that belief?

THE WITNESS: Because it's a pleasure experience, and we know that dopamine's elevated from pleasure experiences, and that the scan studies show that people elevate when they're using the internet.

THE COURT: Thank you.

BY MS. WERNER:

- Q. Does the internet's dopaminergic effect, based on your research and practice, seem to influence individual behavior on the internet?
- 13 A. Could you repeat that? I'm --
  - Q. Does the internet's dopaminergic effect, the way that the internet triggers dopamine --
- 16 A. Yeah.
- 17 Q. -- and sends dopamine to the human brain, seem to impact
- 18 | human behavior?
- 19 A. Yes.
- Q. Is this true for internet addicts only or users more generally?
- 22 | A. No. I think it's true for anyone that uses the internet.
- 23 | It's, again, a matter of degree, just like any intoxicating
- 24 behavior or intoxicating substance would be a matter of degree.
- 25 About 90 percent of people that engage in intoxicating

Greenfield - Direct

behaviors or substances don't develop an addiction, but some 1 2 do. 3 Q. And those people who don't develop an addiction, are there 4 changes that occur in their brains regardless? 5 A. Very much so, but they don't seem to catalyze to the next 6 level, you know, where they don't have control over it. 7 THE COURT: I'm sorry. I didn't hear your percentage. 8 What percentage of people? 9 THE WITNESS: About 90 percent. 10 THE COURT: Thank you. 11 90 percent experience that without becoming addicts? 12 THE WITNESS: Correct. 13 THE COURT: Thank you. 14 Go on. 15 BY MS. WERNER: Is internet addiction in the DSM? 16 17 The -- an aspect of internet addiction is in the DSM as a

- A. The -- an aspect of internet addiction is in the DSM as a provisional diagnosis. The DSM-5 came out quite a while ago.

  It's not been revised. The diagnostic manual that's really used now in medical diagnosis is the International

  Classification of Diseases, or the ICD, and the new ICD-11 has internet addiction diagnoses specified in their nomenclature that have just dropped now into the medical diagnostic systems.

  But the original DSM-5, it's still listed as a provisional.
  - Q. Can you describe --

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- Particularly video game addiction.
- What is the DSM? 2 Q.
- 3 Diagnostic and Statistical Manual that has to do with
- 4 all -- there's about 450 diagnoses of a psychiatric nature, of
- 5 things that can go wrong with you.
- 6 Do you know when the latest version of the DSM was
- 7 finalized?
- 8 You know, it's got to be close to 15 years old now.
- 9 Q. Why is there not an inclusion of internet addiction
- 10 specifically as opposed to internet gaming or something else in
- 11 the DSM?
- 12 Well, I think that there is some lack of clarity about what
- 13 the labeling is going to be. There are different terms that
- 14 people use for defining internet addiction, and sometimes it
- has to do with the type of content that people overuse or 15
- abuse. And so the latest thinking in the field is that 16
- 17 there'll probably be a diagnosis of internet addictions with
- 18 subcategories of specific content areas that people have issues
- 19 with. And that seems to be where the field is heading right
- 20 now.
- 21 What type of content? Q.
- 22 Well, that would include video gaming, chatting, social
- 23 media, pornography, gambling.
- 24 Is there debate in the field about the fact that internet
- 25 addiction and overuse are a phenomenon that people are seeing

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Greenfield - Direct

- in this field of psychology --1
- I don't think anymore. I mean I think at this point it's 2 Α.
- 3 pretty well accepted that internet addiction is a thing.
- 4 no, I don't think there's --
- 5 Is there controversy about the fact that heavy internet
- users demonstrate some common behaviors? 6
- 7 Could you repeat that, please?
- Is there debate about the fact that internet overusers or 8
- 9 internet addicts have some common behavioral impacts?
- 10 I think that's accepted. Α.
- 11 I'd like to turn to your specific research methodology and
- 12 practice. You described how in your early years of clinical
- 13 practice you saw an emerging pattern of behavior regarding the
- 14 internet?
- 15 Α. Yes.
- 16 In those early days of the internet's popular use, did you
- 17 develop any hypotheses about how the internet as a platform was
- 18 affecting individual behavior?
- I had early hunches, but I didn't have the data or 19
- 20 the research during what I call the Wild West days.
- when the internet was hot and new, and nobody knew what was 21
- 22 going on or why people were getting into trouble or doing
- 23 things online. So I had theories but no -- and there wasn't a
- 24 lot published back then either. In fact, my first book was the
- 25 second book on the subject in the world at that time, and that

- 1 | was just in 1999.
- 2 | Q. What were your theories and hypotheses based on?
- 3 A. Well, initially, they were based on my clinical hunches
- 4 | from the patients that were coming in, and then it was later
- 5 based on some of the data I collected for my own research.
- 6 Q. Did you develop a hypothesis about perceived anonymity?
- 7 A. Yes.

- Q. What do you mean by perceived anonymity?
- 9 A. Well, basically that people perceive the internet as an
- 10 anonymous form of communication, even though it really is the
- 11 | least anonymous form of communication. They act as if there's
- 12 | no one watching, and it feels anonymous to them. So I call it
- 13 perceived anonymity because of that distortion of perception.
- 14 Q. Did you develop a hypothesis about disinhibition?
- 15 | A. Yes.
- 16 | O. What is disinhibition?
- 17 | A. The loss of inhibition when they're communicating online.
- 18 | They say and do things that they ordinarily would not do in
- 19 real life or in a real time.
- 20 Q. Did you have a hypothesis about how being more disinhibited
- 21 | might impact one's willingness to lie or play roles on the
- 22 | internet?
- 23 | A. Yes.
- 24 | Q. Did you have a hypothesis about accelerated intimacy?
- 25 A. Yes. That was one of the early phenomenons that I'd

Greenfield - Direct

- noticed in my practice, even before the research. People were engaging in intimacy, either platonic or sexual, at a much more rapid rate than they ordinarily would because of the communication through the internet modality.
  - Q. Did you have a hypothesis about the loss of boundaries on the internet?
  - A. Yes.

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- Q. What do you mean by loss of boundaries?
- 9 A. Well, there's no beginning, middle or end on the internet.

  10 You know, every form of communication prior to the internet had

  11 a built-in boundary to it. You know, every book, TV show,
- a built-in boundary to it. You know, every book, TV show,
- and end. The internet has no beginning, middle and end. It's

movie, magazine, doesn't matter, there's a beginning, middle

- 14 endless, and part of the appeal of that endlessness is the
- brain's capacity to try to want to -- to try to finish it or to
- 16 try to complete it. And that facilitates this sort of endless
- boundariless experience that people engage in and one of the
- 18 reasons people stay online a long time.
- 19 | Q. Relatedly, did you have a hypothesis about time distortion?
- 20 A. Yes, so that's related. One of the things we found early
- 21 on, both clinically and in the research, is that the vast
- 22 majority of us lose track of time and space when we're on a
- 23 screen, particularly on a screen that's connected to the
- 24 | internet. We just can't seem to track time as well.
- 25 Q. What happens when they lose track of time?

- 1 We spend more time on it than we are aware of, and we think 2 it's related partially to elevations of dopamine. 3 instance, if you go to a movie, you experience disassociation 4 to some extent. So it's by and large a kind of pleasurable
- 5 experience, but it means that you're not conscious of the 6 passage of that time.
- 7 Q. Did you have a hypothesis about the frequency with which 8 people lie on the internet?
- 9 Yes. Α.
- 10 And the hypothesis about how often people role play or that 11 they do role play?
- 12 Α. Yes.
- 13 What do you mean by role playing? 0.
- 14 Taking on an alter ego or an identity that is different Α. than the reality of your life. That could include personal 15 characteristics, occupational characteristics, personal 16
- 17 proclivities or powers, some of which can be completely 18 fantasy-based.
- 19 In those early years, did you speak to patients in your 20 clinical practice about role play?
- 21 Α. Yes.
- 22 Q. After developing these hypotheses, did you undertake any 23 research to investigate them?
- 24 Α. Yes.
- 25 Can you tell us about that?

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Greenfield - Direct

- Yeah. Early on, I -- I saw a small study that came out from a colleague that compared heavy internet users to gambling addicts, and that prompted me to -- at that point there had not been any large-scale studies looking at internet behavior. I approached ABC News to see if they would allow us to do a survey on their platform to be able to gather data, and I spent about six months with a statistician from the medical school that I was connected to, designing a study that would evaluate a variety of different behaviors and characteristics about internet use. And once that was designed and set up -- and we had spent a fair amount of time trying to get it right -- we put it up on their servers. And in two weeks, we got probably about 18,500 or so answers. We threw out about 1,500 because of potential statistical issues, and we ended up with about 17,000-plus data points.
- What was the function of your partnership with ABC News? 16
- 17 Just to be able to access their ability to reach people.
- 18 In exchange for that, they were -- once the results were
- 19 tabulated, they had first crack at announcing them, before I
- 20 published the study.
- 21 What did the study ask participants to do?
- 22 A. Basically to complete a survey. I mean there was about 35
- 23 questions, and then within those 35 questions there were
- 24 sub-questions.
- 25 Were those questions specific to internet addiction, or

Greenfield - Direct

- 1 were they generally about internet use?
- 2 A. They're about internet behavior, internet use.
- 3 Q. Is this survey methodology, self-reporting of this kind --
- 4 | A. Yeah.
- 5 Q. -- is that generally accepted as a research method in the
- 6 | field of --
- 7 A. It's one research method, yes.
- 8 Q. Is self-reporting in surveys commonly deployed as a
- 9 research method --
- 10 | A. Yes, it is.
- 11 | Q. -- in psychology?
- 12 Just wait until I finish the question if you don't mind --
- 13 | A. Oh, I'm sorry.
- 14 Q. -- for the benefit of the court reporter.
- 15 A. Yes, I apologize.
- 16  $\parallel$  Q. Is 17,000 a large sample size in psychological research or
- 17 | behavioral science generally?
- 18 A. Yes, it is.
- 19  $\parallel$  Q. What are the benefits of having such a large pool of
- 20 | respondents?
- 21 | A. Well, it enhances the heterogeneity of the sample, which
- 22 | then enhances the ability to generalize to a larger population.
- 23 | It also increases the statistical power that you would garner
- 24 | from the -- from the results.
- 25 | Q. When you say heterogeneity, what do you mean by that?

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Variability; in other words, that there's a wide range of people, circumstances, education, demographics, income, age, race, etc.

Greenfield - Direct

Q. Thank you.

Did the survey ask participants about perceived anonymity?

THE COURT: I'm sorry. Mind if I just interrupt briefly. I'm sorry.

Dr. Greenfield, did you collect demographic data regarding the participants to know whether or not the pool was actually --

THE WITNESS: I'm sorry. Could you repeat that?

THE COURT: Yes.

Did you collect information about the survey respondents so that you could know whether or not the respondents were indeed demographically disparate?

THE WITNESS: Yeah, that's -- part of the data included the demographics, yes.

THE COURT: Thank you.

Please go on.

THE WITNESS: Yeah. Thank you.

And that's -- I -- and that's talked about in the article.

> THE COURT: Thank you.

BY MS. WERNER:

1	Q. When you say the article, did you publish the findings of
2	your 1999 study in a peer-reviewed article as well as on ABC
3	News?

A. Yes.

- 5 Q. Where was that article published?
- 6 A. The Journal of Cyber Psychology and Behavior.
- 7 | Q. And again, that's a peer-reviewed journal?
- A. Yes, it is. The name of it has changed since, but it's still in publication.
- 10 | Q. Did your survey ask users about perceived anonymity?
- 11 | A. Yes.
- 12 | Q. What did it reveal?
- 13 A. That people experience the internet as, in an anonymous way, you know, that they -- they perceive it anonymously.
- 15 | Q. Was this true of all of the survey respondents?
- 16 A. No, no. A percentage. Probably in the 40-ish percentile.
- 17 And I could be wrong; I don't remember all the percentages.
- THE COURT: I'm sorry.
- 19 40 percent perceived it as anonymous?
- 20 THE WITNESS: Yes.
- 21 THE COURT: Thank you.
- 22 | THE WITNESS: Approximately.
- 23 BY MS. WERNER:
- Q. Would it refresh your recollection about the percentage that experienced perceived anonymity to look at the 1999 Cyber

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- Psychology and Behavior article?
- 2 | A. It would probably help, since I published it so long ago.
- MS. WERNER: One moment, please.
- 4 I'm sorry. I'll move on from that.
- 5 THE WITNESS: OK.
- 6 BY MS. WERNER:
  - Q. Did the survey ask about the concept of accelerated
- 8 intimacy?
  - A. Yes.
- 10 | Q. And what did it reveal about accelerated intimacy?
- 11 A. Again, that it's a -- it's a behavior that people endorse.
- 12 Again, not all the people endorse it, but a sizable percentage
- 13 endorsed it.
- 14 | Q. Was that true of all survey respondents?
- 15 A. Well, no, because not everybody endorsed it. So a
- 16 percentage did.
- 17 | Q. And was that more pronounced for internet addicts?
- 18 A. Yeah. So, one of the interesting things is that as people
- 19 | move closer to being diagnosed or meeting the criteria of what
- 20 we called internet addiction -- now, again, that diagnosis was
- 21 | not official back then. We were kind of extrapolating a
- 22 | diagnosis based on an adaptation of the pathological gambling
- 23 criteria. So we modified it slightly in order to come up with
- 24 an accurate way of assessing what happens when you hit so many
- 25 things in your internet behavior that you might then qualify as

M6mWmel2 Greenfield - Direct

- 1 an addict.
- 2 Q. And do you recall what percentage of respondents reported
- 3 | experiencing accelerated intimacy?
- 4 A. I don't remember the exact percentage, no.
- Q. Would it refresh your recollection to see a copy of your
- 6 | 1999 study?
- 7 A. It probably would.
- 8 MS. WERNER: Brief indulgence, your Honor. May I step 9 aside, please?
- THE COURT: That's fine. Please take your time,

  11 counsel.
- 12 MS. WERNER: May I approach the witness, your Honor?
- 13 THE COURT: You may.
- MS. RAVENER: Your Honor, we would ask to see the document.
- 16 THE COURT: Thank you.
- Yes, if you have an extra copy for counsel for the
  United States, I would ask that you provide it to them.
- 19 MS. WERNER: I apologize.
- MS. RAVENER: Thank you.
- 21 | OK.
- 22 BY MS. WERNER:
- 23 Q. Dr. Greenfield, do you recognize this document?
- 24 | A. I do.
- 25 Q. Is this a copy of your 1999 study?

- 1 A. It appears to be.
- 2 | Q. I'd like to direct your attention to page 410 of this
- 3 study, which is marked 26.2 DG-4.
- 4 A. Yes, I see that. Oh, no. Four oh --
- 5 | Q. 410.

- 6 A. 410. Hang on.
  - OK.
- Q. I'd like to direct your attention to the right-hand column
- 9 on page 410.
- 10 A. Yes. You mean the right-hand paragraph?
- 11 Q. The right-hand paragraph.
- 12 A. Yes, I see it.
- 13 Q. Do you see there the section that says intense intimacy?
- 14 A. Yes.
- 15 Q. Would you mind reading that to yourself?
- 16 | A. "Intense" --
- 17 | Q. Just read quietly.
- 18 A. Oh, read it to myself. OK.
- 19 Q. Yes, please.
- 20 | A. OK.
- 21 Q. Does that refresh your recollection about how many
- 22 | respondents reported experiencing accelerated intimacy?
- 23 | A. Yes.
- 24 | Q. About what percentage was that?
- 25 A. 41 percent.

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- 1 Q. And did that number go up for internet addicts?
- 2 A. Yes.
- 3 | Q. What percentage of internet addicts experienced accelerated
- 4 | intimacy?
- 5 A. It rose to 75 percent.
- 6 Q. Thank you. You can put that down for a moment.
- 7 | A. OK.
- 8 Q. You may still need it.
- 9  $\parallel$  A. I know.
- 10 | Q. So don't put it too far.
- 11 | A. OK.
- 12 | Q. Dr. Greenfield, did your survey ask respondents about the
- 13 concept of disinhibition?
- 14 A. Yes.
- 15  $\parallel$  Q. And what did it reveal about disinhibition broadly?
- 16 A. That people experience a sense of disinhibition when
- 17 | communicating online.
- 18 Q. Was that all respondents?
- 19 A. No.
- 20 | Q. Was it a notable percentage?
- 21 A. A notable percentage.
- 22 || Q. Do you recall the percentage?
- 23 | A. No.
- 24 | Q. Would it refresh your recollection to look at the article?
- 25 A. Most definitely.

Greenfield - Direct

- Q. Go ahead. I'd like to direct your attention again to page 410, the right-hand column.
- 3 A. I lost it.
- 4 OK. Sorry.
- Q. In the middle of that second paragraph on the right-hand
- 6 side --
- 7 A. Yes.
- 8 Q. -- if you could look at that to yourself.
- 9 A. Yes.
- 10 Q. How many or what percentage of survey respondents reported
- 11 experiencing disinhibition?
- 12 | A. 43 percent.
- 13 | Q. And did that go up for internet addicts?
- 14 A. Yes, it jumped to 80 percent.
- 15 Q. Thank you.
- 16 Did your survey ask users about a loss of boundaries?
- 17 | A. Yes.
- 18 Q. What did it reveal?
- 19 A. That about 39 percent of people experience a loss of
- 20 | boundaries when communicating online.
- 21 | Q. And did your survey ask about time distortion?
- 22 A. Yes.
- 23 | O. And what did it reveal?
- 24 A. The majority admitted to losing track of time. It didn't
- 25 go into a percentage but that -- it just noted that it was a

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1 majority.

- 2 Q. Did your survey ask respondents about lying and role
- 3 | playing?
- 4 You can put the document down.
- 5 | A. Oh.
- 6 Q. Thank you.
- 7 A. Yeah, I think we did talk about lying and role playing.
- 8 Q. And did it reveal that people do lie online?
- 9 | A. Yes.
- 10 Q. Do you know what sorts of things people admitted lying
- 11 | about?
- 12 A. Well, typically they -- they admit to lying about personal
- 13 characteristics, which would include occupation, height,
- 14 | weight, age, accomplishments, life circumstance, personal --
- 15 | things that reflect them and who they are.
- 16 | Q. Lies that go to a person's identity?
- 17 A. Correct, lies that go to a person's identity. Exactly.
- 18 | Q. Did you make a conclusion in this study about what
- 19 percentage of respondents were suffering from an internet
- 20 compulsion or addiction?
- 21 | A. Yes.
- 22 | Q. About what percentage?
- 23 | A. At the time we found about 5.9 percent, almost 6 percent.
- 24 | Q. For each of the behavioral dynamics we discussed, were
- 25 those present for addicted respondents only or internet users

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1 || who --

- 2 A. No. They -- sorry. They were present for all people, but
- 3 to a greater extent among the addicted people.
- 4 | Q. It's been more than 20 years since this study. Are its
- 5 | conclusions still relevant?
- 6 A. Yes, I believe so. It's still being cited.
- 7 | Q. Why is this still relevant?
- 8 A. Well, it still stands as one of the largest studies done on
- 9 | internet behavior. There have been many, many, many studies
- 10 done since, but it still has validity because of that initial
- 11 definition of what internet addiction is and the percentage of
- 12 people that experience it as well as the behavioral aspects of
- 13 | what people experience when they're online.
- 14 | Q. In the years since this '99 study, have you undertaken
- 15 | additional research on the prevalence of internet use and
- 16 | compulsive internet use?
- 17 | A. Yes.
- 18 | Q. Did that research touch on these same behavioral dynamics?
- 19 A. Yes.
- 20 Q. Including disinhibition?
- 21 | A. Yes.
- 22 Q. Including accelerated intimacy?
- 23 | A. Yes.
- 24 | Q. Did your subsequent research touch on perceived anonymity?
- 25 A. Yes.

- Q. Loss of boundaries?
- 2 A. Yup.

- 3 Q. Time distortion?
- 4 A. Very much so.
- 5 | Q. Did it discuss lying and role playing?
- 6 A. Yes.
- Q. In the years since '99, have you also reviewed research on similar topics by other scholars?
- 9 A. Yeah. Every time -- the answer is yes, I have.
- 10 | Q. Have you stayed abreast of other research on --
- 11 A. Yeah. Every time you write a book or a book chapter or an
- 12 | article, you really have to do a literature review to see
- 13 | what's new and what's come out, because you have to cite that
- 14 | literature in your introduction to justify what you're writing.
- 15 Q. Are there any other reasons why it's important to stay
- 16 abreast of research in your field?
- 17 A. Well, to make sure that what I'm talking about is valid and
- 18 credible and that I'm still on target.
- 19 Q. In the field of psychology, is it generally accepted to
- 20 | inform one's own knowledge and understanding based on a
- 21 continued review of other academic literature?
- 22 A. Yes, and it's also mandated by the state boards to continue
- 23 | vour education as well.
- 24 | Q. We spoke earlier about the lack of consensus about the
- 25 | label of "internet addiction." Is there a lack of consensus,

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or is there dissent in the literature, I should say, about the
1
      experience of disinhibition on the internet?
 2
 3
      A. No. I think people -- there's a pretty good consensus that
     people experience disinhibition when they're online.
 4
 5
      Q. And have other scholars written on that topic?
6
               THE COURT: I'm sorry. Can I just pause on that.
 7
               When you say people experience disinhibition, you mean
8
      the percentage of people reflected in your study, not all
9
     people?
10
               THE WITNESS: Well, I can't speak about all people --
11
               THE COURT: Thank you.
12
               THE WITNESS: -- because I've not evaluated all
13
     people, but --
14
               THE COURT: Thank you.
15
               What's your testimony then?
               THE WITNESS: So my testimony would be the people that
16
17
      I've researched and then the large number of patients that I've
18
      seen in the 20 years in my clinical practice.
19
               THE COURT: Thank you.
20
               So people that have sought you out for treatment?
21
               THE WITNESS: Correct.
22
               THE COURT: Thank you.
23
               Proceed.
24
     BY MS. WERNER:
25
          Focusing in on other academic literature, have others
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- written on the fact that a significant number of internet users experience disinhibition?
- 3 A. Yes.
- 4 | Q. Even if not all internet users?
- 5 A. I would believe that's correct, yes.
- Q. And have other scholars explored the concept of lying and role playing on the internet?
- 8 | A. Yes.
- 9 Q. Have you reviewed research on the extent to which people
- 10 | lie online?
- 11 | A. Yes.
- 12 Q. Does that research include the extent to which people
- 13 | assume others to be lying online?
- 14 A. I can't recall if the research specifically discussed the
- 15 | number of people that assume other people are lying, but I
- 16 | think it's well accepted in the literature that people lie
- 17 | online.
- 18 | Q. Are you familiar with a 2016 study from Indiana University
- 19 and Purdue University on this subject?
- 20 | A. Yes.
- 21 | Q. What was their takeaway? I don't need a specific number,
- 22 | but what was their --
- 23 A. That it's pretty well established that people lie online.
- 24 | 0. And --
- 25 A. Significantly.

M6mWmel2 Greenfield - Direct Did they have a takeaway or conclusion about how often 1 people assume others online to be lying? 2 3 A. I thought the number was around 50 percent, but I could be wrong, so I don't want to misquote it. 4 5 Q. Would it refresh your recollection to see a synopsis of that article? 6 7 A. Probably, yes. 8 MS. WERNER: May I approach the government table, your 9 Honor? 10 THE COURT: Thank you. 11 Yes, you may. 12 MS. WERNER: May I approach the witness? 13 THE COURT: You may. 14 Thank you. 15 MS. WERNER: Brief indulgence? THE COURT: That's fine. Please take your time. 16 17 MS. WERNER: I apologize, your Honor. I showed the government the wrong number. I'm showing the witness what's 18 been marked DG10, defense 26.2 DG-10. 19

20 THE COURT: Thank you.

21 BY MS. WERNER:

- Dr. Greenfield, do you recognize this document?
- 23 Α. Yes.

22

- 24 Ο. What is this?
  - Well, it's the study that was done by Indiana University,

- also Purdue University, in Fort Wayne. 1
- 2 Would it be fair to say that this is an email that you sent Q. 3
- A. Yes, it's an email of some recent studies that corroborated 4 some of my original conclusions. 5
  - OK. If you wouldn't mind looking at the synopsis. 0.
  - Α. Yup.

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me?

- Yes.
- 9 Q. Does this refresh your recollection about how often
- 10 internet users expected other internet users to be honest or to
- lie online? 11
- 12 Α. Yes.
- 13 How often is that in this study? 0.
- Well, this study found that only 2 percent of people expect 14 15 people to be honest online.
- 16 THE COURT: Can you say the percentage again,
- 17 Dr. Greenfield?
- 18 I'm sorry.
- 19 THE WITNESS: 2 percent.
- 20 THE COURT: Thank you.
- 21 And 16 to 32 percent reported self-honesty. In other
- 22 words, when reflecting their own level of honesty, only 16 to
- 23 32 percent felt that they were being honest.
- 24 Ο. Thank you.
- 25 Did this 2016 study from Indiana University draw any

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- conclusions about what is a solid predicter of one's lying behavior online?
  - A. The prediction the evaluation and expectation of how other people were whether other people were lying or not often predicted whether people viewed themselves as lying. Ir other words, the way they saw other people reflected on how they saw themselves in terms of their lying.
  - Q. Thank you.

Are you familiar with a 2011 study published in the Journal of Applied Social Psychology on the topic of lying online?

- A. Yes.
- Q. And what did that study conclude with regard to whether it is normative to distort reality online?
  - A. That it -- the study concluded that it is normative to use deception in the communication on computers and the internet.
    - Q. Are these the only studies you have read about role playing and lying since 1999?
- 19 A. No. I've read dozens, if not hundreds, of studies.
  - Q. And these other studies, do they reach similar conclusions about the prevalence of lying and role playing online?
- 22 A. Yes.
- Q. I'd like to turn from your review of other scholars'
  research to your own clinical practice.
- 25 A. OK.

Case 1:20-cr-00314-GHW

M6mWmel2 Greenfield - Direct

- You testified you've maintained a clinical practice for 1 nearly 40 years and an internet-focused clinic for more than 2
- 3 20. How many patients have you seen in your clinic as opposed
- to in your residency and internship? 4
- 5 I mean it -- probably well over 10,000, conservatively.
- In the field of psychology, is it generally accepted to 6
- 7 inform one's own understanding of psychological behavior and
- dynamics using one's own clinical interactions? 8
- 9 A. Yes, it's one method of informing your understanding of
- 10 human behavior.
- 11 Is it generally accepted to develop theories of human
- 12 behavior based on clinical interactions over time?
- 13 Α. Yes.
- 14 Is that a practice that's been employed by well-known
- 15 psychologists throughout the existence of --
- 16 Well, I think the most well-known psychologist was Freud.
- 17 He based all his original research on case studies.
- 18 Are all of your patients internet addicts?
- 19 Α. No.
- 20 Have you discussed role playing with your patients in your
- 21 own clinical practice?
- 22 Α. Yes.
- 23 Have you discussed lying? 0.
- 24 Α. Yes.

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What do people report lying about, generally? Q.

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- A. Again, personal characteristics that speak to the person's identity or circumstances.
  - Q. These lies about identity, how does that relate to the concept of role playing?
  - A. Well, when you lie about your identity, you're essentially take -- you're essentially role playing. You're essentially taking on the role of another entity.
- Q. What is your sense from your clinical patients of why people do that?
- 10 That's a great question. I mean I think people do it 11 because -- I mean without sounding glib, they do it because 12 they can. On the internet, there's really no check and balance 13 to determine -- there's no threshold to cross. You're not 14 looking at someone in the, you know, eye to eye, and there's no 15 way to validate whether something is true or not. You can be anything you want, say anything you want, and nobody really 16 knows the difference, except that there is the potential to 17 18 verify it later if you actually come in contact with that 19 person. But many times, these relationships remain only 20 online.
  - Q. Have you discussed the concept of disinhibition in your clinical practice with patients?
- 23 | A. Yes.

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Q. And have you discussed the concept of loss of boundaries with your patients?

Greenfield - Direct

- 1 | A. Yes.
- 2 | Q. Have you discussed the concept of time distortion with your
- 3 own patients?
- 4 A. Very much so, yes.
- 5 Q. Have you discussed the concept of perceived anonymity?
- 6 A. Yes.
- 7 | Q. Have you discussed chatrooms with your patients?
- 8 A. Yes.
- 9 Q. And have you, in fact, had patients who spend time in
- 10 | chatrooms?
- 11 | A. Oh, yes.
- 12 | Q. Have you then discussed the reasons why people participate
- 13 | in chatrooms?
- 14 A. Yes.
- 15 | Q. Have you discussed the expression of fantasy in online
- 16 | spaces?
- 17 | A. Yes.
- 18 | Q. Is that limited to sexual fantasy or also nonsexual
- 19 | fantasy?
- 20 | A. No, it's not limited to sexual fantasy. I would say sexual
- 21 | fantasy's the majority, but it's fantasy involving themes of
- 22 | occupational accomplishment, educational accomplishment, life
- 23 circumstance accomplishment; status in life, so to speak.
- 24 | Q. In your clinical practice, have you discussed the idea of
- 25 | broadcast intoxication?

M6mWmel2

A. Yes.

- 2 | Q. What is that?
- 3 A. Well, that's a term that I coined. It really refers to the
- 4 dopaminergic elevation from the act of communicating about
- 5 oneself through the internet modality. It's one of the reasons
- 6 why social media is so powerful and so desirable. The act of
- 7 | broadcasting makes people feel good, and they experience
- 8 pleasure from it.
- 9 Q. Can you flesh that out a bit more; broadcasting how?
- 10 A. Oh, by communicating through the internet. They are
- 11 posting, whether it be in a chatroom or social media outlet or
- 12 | in other formats.
- 13 Q. Thank you.
- 14 Have you discussed the idea of how potent content
- 15 | impacts one's feeling of excitement or pleasure online?
- 16 | A. Yes.
- 17 Q. What is -- what do you mean when you talk about potency of
- 18 | content?
- 19 A. Well, the way I view it is that the content is the drug,
- 20 | the digital drug, so to speak, and the internet is the
- 21 | hypodermic, the delivery mechanism of that content. There is
- 22 | an interaction between the delivery mechanism -- the
- 23 | internet -- and the actual intensity of that context --
- 24 content. I'm sorry.
- 25 So that's why pornography, for instance, is so readily

consumed on the internet. One-third of all internet searches
are for pornography, which is enormous, and it's because that
content has potency, and when combined with the internet
delivery mechanism, there is a synergistic amplification of the
potency of that content, the power of that content.

- Q. So in other words, your hypothesis is that people have a stronger dopamine effect with --
- A. Correct.

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- Q. -- with potent content?
- 10 | A. Correct.
- Q. Have your clinical sessions over the last 20 to 25 years validated your conclusions from your 1999 study?
- 13 | A. Yes.
- 14 | Q. In what sense?
  - A. Well, I see it every day. I mean I don't -- I don't -- I don't ask every patient the 35 questions that were in the original research, but the circumstances that bring them to me generally involve some aspect of the stuff that we looked at in that original research. So the answer is yes.
    - Q. Dr. Greenfield, based on your individual research, research by other academics and practitioners in your field, and your 20 to 25 years of clinical practice with a focus on the internet, have you developed certain conclusions about how individual behavior and psychology are impacted by the internet?
- 25 A. Yes, I have.

Greenfield - Di	ired	٦t
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	Monimierz Greenfreid - Direct
1	Q. What do you conclude about the concept of accelerated
2	intimacy?
3	A. That when people communicate via internet modality, that
4	they experience intimacy in an accelerated fashion.
5	THE COURT: I'm sorry. Can I just be clear about
6	this.
7	When you say people, are you opining that all people
8	experience this, Dr. Greenfield?
9	THE WITNESS: Well, the purpose of doing research is
10	to theoretically extrapolate from a sample to a population. So
11	I would say yes, that I do think that the average person
12	experiences that.
13	Now, I've not examined or tested every person in the
14	world, so I can't say literally, but the purpose of doing
15	research that's the whole basis of research, is to
16	extrapolate from a sample to a population.
17	THE COURT: Thank you.
18	So just to be clear, is it your opinion,
19	Dr. Greenfield, that 100 percent of internet users experience
20	accelerated intimacy?
21	THE WITNESS: Well, I don't think that would probably
22	be accurate.
23	THE COURT: Thank you.
24	What is your opinion then?

THE WITNESS: My opinion is that the vast majority of

people that use the internet experience it. 1 2 THE COURT: Thank you. 3 What's the basis for that? Where do you get the data 4 that supports the statement that the "vast majority" of 5 internet users experience that? 6 THE WITNESS: Sorry. 7 The basis of that would be my research and my clinical 8 practice. 9 THE COURT: Thank you. 10 So the research meaning the 1999 study --11 THE WITNESS: Correct. 12 THE COURT: -- and your experience as a clinical 13 psychologist, is that right? 14 THE WITNESS: That is correct. 15 THE COURT: Thank you. 16 Please go on. 17 BY MS. WERNER: 18 Q. I'd like to go back and continue on that thread for a moment. Your 1999 study did not conclude that 100 percent of 19 20 internet users experienced accelerated intimacy, did it? 21 No, it did not. Α. 22 It was significantly less? 23

Yeah, like a large percentage.

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And so just to clarify that point, would you testify that 100 percent of people --

Greenfield - Direct

- 1 | A. No, I would not.
- 2 | Q. OK.
- 3 | Similarly, what do you conclude about perceived anonymity?
- 4 A. That a sizable percentage experience it. I don't remember
- 5 the number, but 40, 50 percent, something.
- 6 Q. And what do you conclude about the phenomenon of
- 7 disinhibition on the internet?
- 8 A. That a sizeable percentage experience it. I don't remember
- 9 the percentage, but --
- 10 | Q. Well, would you testify that those percentages are set in
- 11 stone, the percentages you found in 1999?
- 12 A. Would I say that they're set in stone?
- 13 Q. Well, I can back up and --
- 14 A. Yeah, I just don't want to say anything that's inaccurate.
- 15 | Q. So, in 1999, you conducted this study of 17,000 people --
- 16 | A. Yes.
- 17 | Q. -- and found some percentages about how often internet
- 18 users and abusers experienced certain behavioral dynamics on
- 19 | the internet. Is that accurate?
- 20 A. That is accurate, yes.
- 21 | Q. Now, it's been 23 years since 1999, right?
- 22 A. Yes.
- 23 Q. And during that time, you have conducted research and
- 24 writing, correct?
- 25 A. Yes, I have.

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Greenfield - Direct

- Q. And have you also seen many patients with whom you've discussed these same phenomena?
  - A. Yes, that's true.
- Q. So would you imagine that those percentages from 1999, that you found in your 1999 survey, if you were to conduct it again
- today, would you find the exact same percentage?

  A. Well, of course, you don't know unless you do
  - A. Well, of course, you don't know unless you do it. I would expect the percentage to be actually higher, but that's a hypothesis, and it's based on my clinical work and the fact that the internet is so much more accessible and readily available and that we now have untethered, portablized access,

which has only increased the phenomenon significantly.

Remember, when I did this research, the smartphone didn't exist and now it does. And it's been a game changer. So I would -- again, hypothetically, I would imagine the percentages are higher.

- Q. And does your clinical practice confirm, in part, that hypothesis?
- 19 A. It does, but again -- yes, yes, it does.
  - Q. And when you talk about the smartphone as a game changer, what do you mean by that?
    - A. Well, the smartphone's only been around 13-plus years or so, and in that short period of time we've reached an 85 to 90 percent adoption rate in the United States. So virtually everybody has a smartphone. And the smartphone's power is in

M6mWmel2

its access to the internet. If it wasn't accessible to the internet, people would lose interest in it immediately. So it's become the dominant form of internet access around the world, so much so that I call it a portable dopamine pump.

I mean I left my smartphone downstairs, because I had to give it up, and I feel uncomfortable now because I don't have it. That's how attached we are to it, and the reason we're attached to it is because of that repeated intermittent, variable dopamine hit that we get from it. So I, again, think that the numbers would be higher.

Q. In addition to the smartphone, have there been other changes in the internet space that impact user access?

A. Yes, tremendously. Again, when I did my original research, wi-fi wasn't a thing. Laptops and tablets were really not a thing. Smartphones certainly weren't around, and the most important change is that when I did this original research, we were on dial-up. If you -- I don't know how many people in here remember that, but that was communicating at a fraction of the speed that we communicate now.

In those days, you had to go online. Now you're always online. So there's instant access, and one of the things we know is that the faster a substance or behavior induces an intoxicating response, the more addictive that substance or behavior is. And this is true of drugs as well as behavior.

- Q. What is your sense of how the majority of respondents in your 1999 study were accessing the internet?
  - A. Could you repeat that?
- 4 Q. What is your sense of how the majority of respondents in
- 5 your '99 study were accessing the internet?
- A. Well, at that time, the only way they could access it was dial-up.
  - Q. Would that be from a home computer or --
- 9 A. Yes, essentially from a desktop home computer.
- 10 | Q. Going --
- 11 A. Which is not the majority now.
- 12 | Q. What is the majority now?
- 13 A. Smartphone.
- 14 | Q. And what is that conclusion based on?
- 15 A. Oh, there's been numbers of studies that have verified that
- 16 the smartphone is becoming the dominant access point for
- 17 | internet access.
- 18 Q. And do your patients discuss their smartphones and how they
- 19 | impact their use and behavior?
- 20 | A. Yeah, they come in talking about their addiction to their
- 21 smartphone. That is a common complaint. Some people want to
- 22 do something about it and some people do not.
- 23 Q. Has the availability of a smartphone impacted the way
- 24 people engage in chat spaces in your clinical practice?
- 25 A. Yes.

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O. How so?

2 A. Because, again, there's no threshold to cross. It's always

3 on and easily accessible, and the more accessible and available

4 a substance or behavior is that has intoxicating properties,

the more likely you're going to use it or overuse it.

Q. Thank you.

Going back a moment to this concept of disinhibition, what is your current impression of how internet users experience disinhibition online?

THE COURT: I'm sorry. Can you rephrase the question.

Is the question how all internet users experience disinhibition online?

MS. WERNER: Thank you, your Honor. It's a good clarification.

- Q. What is your takeaway about how nonaddicted internet users in other words, internet users who you have not diagnosed as addicted experience the phenomenon of disinhibition online?
- A. Yeah. I mean the questions that we ask, you know, that we use to access that or to get at that phenomena is basically the idea that you'd be more likely to say or do something online or reveal some aspect of yourself than you ordinarily would do in a real-time interaction.

THE COURT: I'm sorry. Can I just clarify that. I apologize.

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1 What's the basis for that position, Dr. Greenfield?
2 Counsel's question was predicated on the concept that these are
3 not people that you have treated. So what's the basis for your

position regarding this mass of other people's views --

THE WITNESS: Oh. Maybe I misunderstood.

THE COURT: Thank you.

Counsel, can you rephrase the question, please.

BY MS. WERNER:

- Q. Dr. Greenfield, asking you specifically about internet users who you have not diagnosed as addicts.
- A. So, I just -- I'm -- can I ask for clarification? Are you talking about the people who participated in my study, or are you talking about people who have come to my office who then turn out not to be internet addicts?
- Q. I am asking a general question about your belief as a clinical psychologist, your belief about how nonaddicted internet users experience the internet in a general sense. So internet users who are not necessarily addicts, do some or many of them experience disinhibition, in your opinion?
- A. I would say a sizeable percentage do, not dissimilar from the percentage that we found in the study.
- Q. And what is that based on?
  - A. Well, it's based on the study and it's based on my continued assessment of people when they come in to see me, some of whom do not even have internet issues or are not

- 1 internet-addicted.
- Q. Do you diagnose 100 percent of people who come to see you with internet addiction?
- 4 A. Oh, not even close, no.
- 5 Q. Is your conclusion about the prevalence of disinhibition
- 6 also based on your review of other literature in the field?
- 7 A. Yes.
- Q. Do you draw any conclusions about the prevalence of time
- 9 distortion among the general internet user as opposed to a
- 10 | diagnosed internet addict?
- 11 A. Yeah. And that's based, again, on my original research and
- 12 then my subsequent evaluation and observation of all the people
- 13 | that have come to see me.
- 14 | Q. And what is your conclusion today about time distortion?
- 15 | A. I mean I think virtually everybody experiences it. I --
- 16 you know, I don't have a legitimate basis to say that everybody
- 17 does, but my opinion is that just about all of us do.
- 18 Q. And what about loss of boundaries; how does the general
- 19 | internet user experience a loss of boundaries, in your opinion?
- 20 | A. A large percentage experience a loss of boundaries. I
- 21 | think less -- a smaller percentage than experience time
- 22 | distortion.
- 23 | O. What is that based on?
- 24 A. Again, my original research and then the subsequent people
- 25 | that have come to see me.

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- Q. And also --
- 2 A. And my review of the literature.
- 3 Q. What is your conclusion today about how often internet
- 4 users who are not diagnosed internet addicts, how often they
- 5 | lie online?
- 6 A. I mean I pretty much assume that everybody that goes online
- 7  $\parallel$  lies, and --
- 8 Q. And what is that based on?
- 9 A. Well, it's based on my research. It's based on other
- 10 people's research. It's based on the fact that people come in
- 11 and tell me all the time about how much they lie and how much
- 12 | they assume everyone else is lying.
- 13 | Q. Does that include your review of literature like --
- 14 A. Yes.
- 15 | Q. -- the 2016 study and the 2011 study --
- 16 A. Yes, similar to the results that we discussed earlier.
- 17 | Q. Do you draw any conclusions about the ability of a typical
- 18 | internet user to tell whether others online are lying or
- 19 playing roles?
- 20 | A. Well, that's just the thing. You can't know whether
- 21 | somebody's lying because there's no way to validate it. But I
- 22 | think a large percentage of people may have some expectation
- 23 | that there's lying going on.
- 24 (Continued on next page)

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- 1 Is that supported by the 2011 study --
- 2 Α. Yes.
  - -- that you reviewed? 0.
- 4 Α. Yes.

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- 5 What conclusions do you draw about the phenomenon of 6 broadcast intoxication for the average non-addicted Internet 7 user?
  - A. Well, again, since we have so much data on social media now I think it is well established that the phenomena broadcast intoxication exists.
    - Can you spell that out again, what you mean by broadcast intoxication?
    - A. Well, another way of looking at it is what we call social validation looping, which is this idea that if you do something either real or imagined and you broadcast it, meaning put it up on the Internet in some fashion, and you get a degree of likes or acknowledgment or comments, that's an intoxication loop and it enhances the likelihood that you are going to repeat it. Now, the social media channels know this and they use this as a way to keep your eyes on the screen. They want everybody on social media all the time because they sell your data and they sell you products and they sell advertising. So the whole thing is a big ruse, essentially, to keep our eyes on screen but it is all based on that dopaminergic innervation from talking about their lives or some -- whether real or fake, in a

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Greenfield - Direct

- way that other people are going to rank it, rate it, comment on it, like it, and then that creates a social validation loop.
- 3 | It is dangerous, potentially.
- Q. I think you testified that broadcast intoxication was your term. Have other scholars written on the same dynamic?
  - A. Yes, they call it different things. I mean, social validation looping is another term.
    - Q. Have you drawn any conclusions over your career about the maybe factor?
  - A. Yes, I have.
- 11 | Q. What is the maybe factor?
  - A. The maybe factor is a term that is my term, but really what it refers to is that one of the things we know about dopamine innervation and reward is that the anticipation of a reward is actually more dopaminergically enhancing than the actual reward itself, so the expectation that you might win or maybe will win, let's say in gambling or something online, it doesn't matter what it is, actually innervates dopamine at twice the level that you ordinarily would. And this is based on animal studies, primate studies that have been done by a pretty well-known neurologist out of Stanford, and he shows graphically how anticipated dopamine release is higher. So that's the maybe factor. See, it's the reason why people will stand in front of a slot machine or scroll through their feeds over and over because maybe they'll see something they like, or

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Greenfield - Direct

maybe that really keeps us connected.

- maybe they'll see something that's relevant, or maybe they'll 1 see something that is appealing. But if you know for a fact 2 3 that it will be there, or if you know for a fact that it won't 4 be there, you will lose interest. It is the variability, the
  - Q. So in layman's terms are you saying there is a dopamine hit that comes when the pictures are rotating on the slot machine and not just when the pictures settle and you know whether you have won or lost?
  - I'm saying, yes -- the answer is yes to that, and I'm saying that you are experiencing an anticipated dopamine hit when you get in the car to go to the casino. I'm saying when you walk up and you see the computer opened and it is online, you are already experiencing that anticipation.
  - 0. And is your impression that Internet users, to a large degree, experience the maybe factor or only Internet addicts? No, I think we all do, or -- yes, I think we all do, most
- 18 of us.
- What is that based on? 19 Q.
  - It is based on my research. It is based on my review of the literature, it is based on my patients, and it is based on me on the fact that -- because I use myself as my own subject, I watch my behavior as well. So I think the fact that you have got access to something that will maybe be pleasurable in your pocket, it's almost impossible not to look at it.

- 1 Is that also based on your understanding of addiction
- medicine --2
- 3 Yes. Α.
- 4 -- through evolutionary biology? Q.
- 5 Yes. Very much so. Α.
- Do you draw any conclusions at this point in your career 6
- 7 about variable reinforcement?
- Yes. 8 Α.
- 9 What is variable reinforcement? Ο.
- 10 So variable reinforcement is speaking to the issue that I
- 11 was just talking about in terms of the maybe factor.
- 12 terms of behavioral conditioning, anything that is reinforced
- 13 in an unpredictable and variable format is far more addictive
- 14 or far more resistant to extinguish than if it is regularly
- 15 reinforced so this is why -- well, this is why the Internet is
- 16 so addictive, in a sense, because it variably reinforces you.
- 17 Sometimes there is something good, sometimes there isn't, but
- you don't know when and you don't know where and you don't know 18
- 19 how good it will be.
- 20 Is your sense that this dynamic of variable reinforcement
- 21 impacts non-addicted Internet users as well as Internet
- 22 addicts?
- 23 It is my opinion, yes.
- 24 Ο. In what way?
- 25 That we all -- you know, well, that the anticipation of the Α.

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Greenfield - Direct

- possibility of seeing something and because occasionally we do 1 see something we like or find interesting or appealing, or that 2 3 is relevant to us which then elevates dopamine, that 4 anticipation increases the likelihood that you are going to 5 pick it up and click, or scroll, or tap, or use your mouse.
  - Q. Do you draw any conclusions at this point in your career about how potent content impacts user experience online -- and I mean a non-addicted user.
  - I think the more potent the content the more likely the potential abuse will occur.
  - What is that based on?
  - Again, based on my research, based on my clinical experience, and based on the literature. That is pretty well -- and not just literature in terms of the Internet but addiction medicine literature.
    - Have you developed an understanding of a concept called synergistic amplification?
- 18 Α. Yes.
- 19 What is that? Q.
- 20 I mentioned synergistic amplification earlier, it is the 21 interaction between the content and the Internet delivery 22 mechanism. Because the Internet delivers it in a very rapid 23 format in a focused way, it synergizes the potency and 24 available of that content. So for instance, pornography has 25 been around a long time, long before the Internet has, but

- there is no doubt, based on the data -- not my data only but 1
- the data in the literature -- that pornography is being 2
- 3 consumed at epidemic levels now and, again, it is because of
- that synergistic amplification of that content. 4
- 5 Q. Is synergistic amplification a concept that applies only to
- Internet addicts or to Internet users more broadly? 6
- 7 No, I think it applies to anyone that uses the Internet.
- 8 Dr. Greenfield, is it correct to a say that most people in
- 9 the countries -- the United States -- today spend at least some
- 10 time on the Internet?
- 11 A. Yeah, I think you could safely say that. I am sure that
- 12 there are a few people out there who do not but it's pretty
- 13 prevalent.
- 14 Q. So to ask something that may be obvious, is it fair to say
- that most people in the United States have a basic familiarity 15
- with their own online experience? 16
- 17 I think that's a safe thing to say.
- 18 Q. Can a person who knows only about their own online
- 19 experience draw conclusions with as much force as you are able
- 20 to draw, based on your work?
- 21 Could you clarify that question?
- 22 Your work is based on your research, your review of other
- 23 literature, and your clinical practice; correct?
- 24 Α. Yes.
- 25 And fair to say that the conclusions you draw, all of the

Greenfield - Direct

conclusions that you have discussed are based on those things? 1

Α. Yes.

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- And your practice, your research --0.
- Yes, I would agree. Α.
  - -- your review of the literature?

Does a single Internet user who knows their own experience with the Internet, is that person able to draw conclusions with as much force and weight as the conclusions you can draw in your career?

- Well, I don't know every theoretical person that you are referring to so I would say probably not, unless they have some expertise or knowledge that goes beyond the average person. would say that my opinion is an informed one based on my work.
- Q. What is the value of examining behavioral psychology and dynamics across a set of thousands of people?
- Could you repeat that, please?
- What is the value of examining behavioral psychology or human behaviors across a set of thousands of people as opposed to examining the human behavior in a single person?
- A. Well, theoretically it is so you can extrapolate to a larger population-based behavior, in other words that you can make statements that extend beyond the individual, that this is how we create diagnostic categories is that we extrapolate from a sample to a larger group and that's how we develop prevalence statistics as well.

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Greenfield - Direct

1 So can any Internet user draw the conclusions that you have been able to reach over your career? 2 3 I mean, I guess if they did everything I did, maybe. 4 MS. WERNER: Brief indulgence, your Honor? 5 THE COURT: That's fine. Take your time, counsel. 6 MS. WERNER: No further questions. 7 THE COURT: Thank you very much. 8 THE WITNESS: Is it --9 THE COURT: I'm going to respond to your question. 10 I'm going to take a break now before we begin with the 11 cross-examination of Dr. Greenfield. I'm going to propose that 12 we take a relatively lengthy break to let everyone stretch 13 their legs and also to eat something, if you would like. It is 14 about 11:48 right now by my clock, I'm going to propose that we 15 reconvene at 12:30 to continue Dr. Greenfield's testimony. Counsel for the United States, is there request for an 16 17 instruction? 18 MS. RAVENER: Yes, your Honor. We would ask that Dr. Greenfield be instructed, as would be typical for a witness 19 20 on cross-examination, not to discuss his testimony. 21 THE COURT: Good. Thank you very much.

So Dr. Greenfield, as you just heard the United States request, you should not talk about this case or your testimony here with anyone during the course of this break. because you are about to be cross-examined. And so I am

Greenfield - Direct

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directing that you not discuss this case or your testimony here
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      with anyone, including, in particular, counsel for defendant.
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               With that, I look forward to seeing you all back here
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      in about 40 minutes. Thank you.
5
               (Luncheon recess)
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## AFTERNOON SESSION

2 12:30 p.m.

THE COURT: So we are back on the record after our lunch break. Let me turn to counsel for the United States. Are you prepared?

MS. RAVENER: We are, your Honor.

THE COURT: Good. Thank you. So let's begin.

MS. RAVENER: Thank you, your Honor. One moment?

THE COURT: Thank you.

MS. RAVENER: Thank you very much, your Honor, and if I could have permission as well to remove my mask during questioning?

THE COURT: Thank you. Yes, you may.

MS. RAVENER: Thank you.

## 15 CROSS-EXAMINATION

- 16 BY MS. RAVENER:
- 17 Q. Good afternoon, Dr. Greenfield.
- 18 A. Good afternoon.
- Q. Dr. Greenfield, your speciality within your field is the
- 20 study of Internet addiction, correct?
- 21 A. I think my study is Internet behavior and addiction, but 22 yeah.
- 23 Q. So you believe that your speciality is all Internet
- 24 behavior; is that right?
  - A. I believe that I have expertise on the use of the Internet,

M6M5mel3 Greenfield - Cross

- 1 | and then obviously it's abuse.
- 2 | Q. And let me ask you this. Your website is
- 3 virtualaddiction.com; correct?
- 4 A. Correct.
- 5 | Q. And you have written two books; correct?
- 6 A. Correct.
- 7 Q. And the first one is called "Virtual Addiction;" right?
- 8 A. Correct.
- 9 Q. And the second one is called, "Overcoming Internet
- 10 Addiction for Dummies, correct?
- 11 A. Correct.
- 12 | Q. And you run a center which you call the Center for Internet
- and Technology Addiction; correct?
- 14 A. Correct.
- 15 | Q. And that focus includes too much shopping online; right?
- 16 A. Yeah.
- 17 | Q. And it includes distracted driving because someone is using
- 18 | their cell phone while operating a car; right?
- 19 A. Correct.
- 20 | Q. It includes sexual behavior online; right?
- 21 A. Correct.
- 22 | Q. Like pornography?
- 23 | A. Among other things, yeah.
- Q. It includes online gambling; is that right?
- 25 A. Yup.

M6M5mel3 Greenfield - Cross

- 1 | Q. And it includes video games; correct?
- 2 | A. Yes.
- 3 Q. And those are the topics, the ones I just listed, that you
- 4 | typically write and talk about, correct?
- 5 A. Well, yes, I talk about all of those things but I also --
- 6 there are other things that I talk about that are not on your
- 7 list.
- 8 Q. OK. But on your website, for example, you hold yourself
- 9 | out with areas including -- I'm sorry, you specify that your
- 10 areas are too much shopping online, Internet addiction,
- 11 distracted driving, pornography, online gambling, and video
- 12 games; correct? Those are the topics that you list?
- 13 | A. Yes.
- 14 Q. And your book, "Overcoming Internet Addiction for Dummies,"
- 15 | lists several self-tests; correct?
- 16 A. Correct.
- 17 | Q. And those tests are smartphone compulsion; right?
- 18 A. Yes.
- 19 Q. Digital distraction, right?
- 20 | A. Right.
- 21 | Q. Video game addiction, right?
- 22 A. Yes.
- 23 Q. Shopping, gambling and investing, right?
- 24 | A. Right.
- 25 | Q. And online pornography, right?

Greenfield - Cross

- 1 Α. Right.
- And those are the topics, the ones I just listed with 2
- 3 respect to your self-tests for which you typically treat
- 4 patients; correct?
- 5 A. I would say that the majority of patients fall into one of
- 6 those categories. There are a few categories that I deal with
- 7 that are not listed in that, among those tests.
- Q. But those are the majority of your clinical practice, 8
- 9 right?
- 10 70 percent, 75 percent. Α.
- 11 Ο. 75 percent.
- 12 Α. Yeah.
- 13 And again, your website lists and specifies four areas that Ο.
- 14 you cover -- Internet and smartphone addiction, video game and
- pornography, and distracted driving, right? Those four issues? 15
- 16 Α. Yes.
- 17 You work, primarily, as a practicing psychologist with a
- 18 specialty in addictions and sex addiction treatment, right?
- 19 Well, I work as a general psychologist and then I have a
- 20 subspeciality in Internet behavior and addiction so I see about
- 21 30 percent of my patients are just, have nothing to do with the
- 22 Internet, like zero. They may use the Internet but they're not
- 23 dealing with problems related to the Internet.
- 24 OK. And doesn't your website state that you are a
- 25 practicing psychologist with a speciality in addictions and sex

- 1 | addiction treatment?
- 2 A. Yes, but a speciality doesn't mean -- it doesn't mean
- 3 | exclusivity.
- 4 | Q. You also advertise yourself as an expert witness, right?
- 5 A. I have done expert witness work, yes.
- 6 Q. Well, your website offers that service, correct?
- 7 A. It's on the website, yes.
- 8 Q. And you state that you have provided testimony on cases
- 9 | involving divorce, right?
- 10 | A. I have, yes.
- 11 | Q. Legal problems arising from abuse or addiction to the
- 12 Internet or Internet pornography and resulting issues in the
- 13 | workplace, right?
- 14 A. I have dealt with all of those, yes.
- 15 | Q. Those are the topics that you describe you have provided
- 16 | testimony about before, right?
- 17 | A. Yup.
- 18 Q. Now, when we talk about the term addiction that's not a
- 19 | real medical term, right?
- 20 A. Yeah. Actually, the word addiction is not a medical term.
- 21 Q. Thank you.
- 22 If you don't have -- you don't have a medical degree,
- 23 | right, Dr. Greenfield?
- 24 | A. I do not.
- 25 | Q. And addiction is just a term you use because it's popular

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Greenfield - Cross

1 | in the media; isn't that right?

- A. No, that is not correct.
- 3 Q. OK. Are you familiar with your testimony under oath in
- 4 this court house that you discussed earlier today in *United*
- 5 | States v. D'Amelio?
- 6 A. I don't recall everything I said in that testimony, no.
- 7 | Q. OK, well why don't we take a look at it at Government
- 8 | Exhibit 6 --
- 9 | A. OK.
- 10 | Q. -- transcript page 138, and I will ask if we can bring that
- 11 | up on the screen for you.
- 12 | A. On one of these screens?
- 13 | O. Yes.
- When you testified in *United States v. D'Amelio* you
- were under oath; is that right, Dr. Greenfield?
- 16 | A. Yes.
- 17 | Q. I would like to direct you -- do you have it up?
- 18 | A. Nope.
- 19 | Q. We can provide you with a hard copy.
- 20 | A. OK.
- 21 | Q. And we can provide the Court and defense counsel with hard
- 22 copies as well.
- 23 A. Thank you. Am I supposed to turn to a page?
- 24 | Q. Yes. I am referring to transcript page 138, Government
- 25 Exhibit 6.

Greenfield - Cross

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- 1 MR. MARVINNY: We have it.
- 2 A. Yes, I see it.
- 3 | Q. Dr. Greenfield, does that refresh your memory that in
- 4 | that -- in the D'Amelio case -- you testified that addiction is
- 5 a popular term that the press and the media use?
- 6 A. Yes, I did say that.
  - Q. And, Dr. Greenfield, I ask you to put that down now.
- 8 | A. OK.

- 9 Q. Dr. Greenfield, we don't really have a formal definition of
- addiction when it comes to the Internet, right?
- 11 A. I don't think that's correct. I don't agree with that.
- 12 Q. OK. Well, that was your testimony in the *D'Amelio* case,
- 13 | correct?
- 14 A. Well, the term --
- 15 Q. No, I'm asking you a question about your prior testimony,
- 16 || sir.
- 17 A. I actually don't -- I didn't have a chance to read what you
- 18 | just gave me.
- 19 Q. So I can direct you to it.
- 20 | A. OK.
- 21 | Q. Please turn back to Government Exhibit 6 at transcript 138.
- 22 | A. OK.
- 23 | Q. Does that refresh your recollection that, under oath, in
- 24 | the *D'Amelio* case, you stated we don't really have a formal
- 25 definition of addiction yet with the Internet?

Greenfield - Cross

- 1 Α. Yeah.
- 2 Was that your testimony? Q.
- 3 Yes, that was. Then. Α.
  - In 2009, correct? Q.
  - Α. Yes.

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- 6 And it's your testimony that in the intervening
- 7 approximately 10 years, that's completely changed?
- MS. WERNER: Objection. 8
- 9 THE COURT: Thank you.
- 10 You can rephrase the question.
- 11 BY MS. RAVENER:
- 12 Q. It is your testimony that that has changed since 2009?
- 13 that what you are telling us?
- 14 A. I think in the last 12 or 13 years things have changed,
- 15 yes.
- Q. Well, in 2009, with respect to, with specific regard to 16
- 17 technology and Internet addiction, no scientific agreement
- exists -- I'm sorry. Let me back up. Withdrawn. 18
- 19 Today, with specific regard to Internet and technology
- 20 addiction, no scientific agreement currently exists on what the
- 21 final diagnostic labels will be, right?
- 22 A. That's true.
- Q. And that is a statement that you have made in your book 23
- 24 written last year, right?
- 25 That is correct. Α.

Greenfield - Cross

- 1 We are not quite at a point in the science of diagnosis and 2 treatment of Internet-related disorders to make those
- 3 decisions, correct?
- No, that's not what I'm saying. 4 Α.
- OK. Well, let me show you your book, Government Exhibit 7. 5
- No, I know what I said in the book. I agree with what you 6
- 7 said I said. What I am talking about is the diagnostic
- 8 labeling. I do think there is agreement in the literature that
- 9 there is such a thing as Internet addiction.
- 10 OK. Well, let's talk a little bit more about that. Ο.
- 11 Α. OK.
- 12 As of now, Internet and screen addictions are still
- 13 relatively new areas of study even in your view, correct?
- 14 By comparison to the substance abuse arena I would say they
- 15 are on the newer side, yes.
- And as a result, in your view, addiction medicine has not 16
- 17 yet fully developed definitive diagnostic markers for these
- 18 purported problems, right?
- 19 They have not developed diagnostic labels. There are
- 20 lots of markers that have been widely accepted.
- 21 Ο. Let's take a look at Government Exhibit 8 at page 147.
- 22 MS. WERNER: I'm sorry. What is Government Exhibit 8?
- 23 We don't have that.
- 24 MS. RAVENER: You should in your binder.
- 25 We didn't receive a binder. MS. WERNER:

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MS. RAVENER: We can provide it to you, it is his book.

- THE WITNESS: Do you want me to look at something?
- 4 BY MS. RAVENER:
- Q. Yes, please turn to Government Exhibit 8. Do you recognize
- 6 this as page 147 of your book, "Overcoming Internet Addiction
- 7 | for Dummies," Dr. Greenfield?
- A. I don't see that here but I may not be looking in the right section so you are going to have to help me here.
- 10 | Q. OK. Do you see Government Exhibit 8?
- 11 A. Is it tabbed? Is that what you are telling me?
- 12 | Q. Yes, it is.
- 13 A. I am in 8 and I am on page 147, and what I see --
- 14 Q. There is a difference, Dr. Greenfield, between the things
- 15 | labeled DX and the regular numbers so you might want to turn
- 16 | further.
- A. OK. I'm happy to do that. I just don't know what I am doing here. OK. Did you say D8?
- 19 Q. Government Exhibit 8, just the number 8, Dr. Greenfield.
- 20 | A. I don't know what I am doing wrong here.
- MS. RAVENER: Your Honor, if I may ask for permission to approach the witness with the document?
- THE COURT: You may.
- 24 THE WITNESS: Yes. If you have it. I can't find it.
- 25 BY MS. RAVENER:

- Q. Dr. Greenfield, do you recognize that document as page 147 of your book "Overcoming Internet Addiction for Dummies?"
- Z | Of your book overcoming internet
  - 3 A. I do.
  - 4 Q. Do you see where it says that currently, no final consensus
- 5 | exists -- I'm sorry -- that as a result, addiction medicine has
- 6 | not yet fully developed definitive diagnostic markers for these
- 7 problems?
- 8 A. Yes, I see that.
- 9 Q. Thank you. You can put that down.
- 10 | A. OK.
- 11 | Q. That's a book written by you, right?
- 12 | A. It is.
- 13 | Q. And it was published last year, right?
- 14 A. That is correct.
- 15 | Q. Dr. Greenfield, as we sit here today, currently no final
- 16 | consensus exists on which diagnostic markers and symptoms are
- 17 | necessary to warrant an Internet and screen addiction
- 18 | diagnostic label, right?
- 19 A. I think that they're -- no, that's not what I am saying. I
- 20 | think that there are clear indicators of diagnostic symptoms,
- 21 | the issue is we don't have a definitive agreement on how to
- 22 | label those and in what constellation one would see those, yes.
- 23 Q. OK. Well, let's be clear about it. Can we turn to
- 24 Government Exhibit 9?
- 25 A. OK.

- Greenfield Cross
- 1 This should now be up on the screen -- I hope -- for you.
- 2 There is nothing on the screen. Α.
- 3 OK. If you can turn to the ninth tab in your binder, just
- 4 the number 9?
- 5 I see it. Α.
- Do you recognize that as page 148 of your book "Overcoming 6
- 7 Internet Addiction for Dummies?"
- 8 Α. Yes.
- 9 I would like to --Ο.
- 10 Now -- well, that's all right, I have got it.
- 11 I would like to direct you to the first sentence on that
- 12 page --
- 13 A. Yes.
- 14 -- where it states in your words: Currently, no final
- 15 consensus exists on which diagnostic markers and symptoms are
- 16 necessary to warrant an Internet and screen addiction
- 17 diagnostic label; correct?
- 18 A. That is correct, but there is a sentence right after it
- that clarifies that. 19
- 20 Q. And you are referring to the fact that in your view, in
- 21 your words, there is general agreement on many of the relevant
- 22 issues you present in this chapter; is that right?
- 23 That is -- well, I am not just talking about my opinion, I
- 24 am talking about general agreement among the professional
- 25 community.

- Q. Dr. Greenfield, that's your opinion of that general agreement, correct?
- 3 A. Absolutely it is my opinion.
- 4 Q. And that's because the statements we are looking at right
- 5 now are written by you in your book, right?
- 6 A. Absolutely true, yes.
  - Q. And again, that was published last year; right?
- 8 A. Correct.

- Q. Dr. Greenfield, you can put that down.
- There are major organizations that evaluate new psychological diagnoses and phenomena, right?
- 12 | A. What are you referring to? I'm sorry.
- 13 Q. So, like, the World Health Organization looks at whether
- 14 | there are new psychological diagnoses and phenomena in the
- 15 world, right?
- 16 A. That is correct.
- 17 Q. And the American Psychiatric Association does that too,
- 18 | right?
- 19 A. Yes.
- 20 Q. And your concept of compulsive Internet addiction is not
- 21 recognized by the World Health Organization, right?
- 22 | A. No, I would not agree with that. I think that they have
- categories now regarding compulsive online use that are in the
- 24 | ICD-11.
- MS. RAVENER: If I could just approach one moment,

- 1 | your Honor, to retrieve my document?
- THE COURT: Thank you. You may.
- 3 Q. Dr. Greenfield, if we can try to show you Government
- 4 Exhibit 8 again, which is page 147 of your book?
- 5 A. Yes. OK.
- 6 Q. OK. That is where you explain that the most agreed upon
- 7 | term, to date, which is specific only to video game addiction,
- 8 | is Internet gaming disorder; correct?
- 9 A. That is correct.
- 10 Q. And you state that that appears in the World Health
- 11 Organization's International Classification of Diseases -- or
- 12 | ICD-11 listing -- as gaming disorder; correct?
- 13 A. That is correct.
- 14 | Q. So there is no Internet addiction listed in the World
- 15 | Health Organization's ICD-11, correct?
- 16 A. That is correct.
- 17 | Q. Internet addiction is also not recognized by the American
- 18 | Psychiatric Association in the Diagnostic and Statistical
- 19 | Manual of Mental Disorders -- or the DSM-5; right?
- 20 A. That is correct. The only thing that is in it is the
- 21 provisional diagnosis for video game addiction.
- 22 | Q. And that is specific to video game addiction, right?
- 23 A. That is correct.
- 24 | Q. And that is current as of today, correct?
- 25 A. It is current but far outdated.

Greenfield - Cross

- 1 | Q. In your view it is outdated?
- 2 A. In my view it is outdated, yes.
- 3 | Q. That's because the DSM-5 was updated in approximately 2013;
- 4 | is that right?
- 5 A. About that. About 15 years old.
- 6 Q. And you consider 15 years outdated?
- 7 | A. I do.
- 8 THE COURT: Sorry. Can I break in here? Wasn't it 9 updated in March, the DSM-5?
- 10 MS. RAVENER: Your Honor, that may be right.
- 11 | THE COURT: Thank you.
- 12 | THE WITNESS: I haven't seen it, so.
- 13 | THE COURT: Thank you. You may proceed.
- 14 BY MS. RAVENER:
- 15 | Q. If we could clarify that, how --
- 16 A. Yeah. I haven't used anything new that came out in March
- 17 | so I'm not familiar with it.
- 18 Q. So what current version of the DSM-5 do you use, Doctor?
- 19 A. The original version, the thicker one that came out in
- 20 | 2013.
- 21 | Q. And you understand that it is periodically updated or
- 22 | supplemented?
- 23 | A. I do.
- 24 | Q. And it may have been updated as recently as March?
- 25 A. Apparently. He is saying it is, so.

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- Q. And you are not familiar with any of those updates?
- 2 A. I have not read it.
  - Q. You have not read any of the updates?
- 4 A. Not the March update, no.
- 5 | Q. When including Internet gaming disorder, the American
- 6 | Psychiatric Association specified that the criteria for this
- 7 condition is limited to Internet gaming and does not include
- 8 general use of the Internet, online gambling, or social media;
- 9 correct?
- 10 A. I'm not -- I don't have that in front of me but I take your
- 11 word for it.
- 12 Q. Well, Dr. Greenfield, is that true or not true?
- 13 A. Yeah, that -- I think that the definition in -- they have
- 14 | the most evidence on video game addiction so I think that's
- 15 probably accurate, yes.
- 16 | Q. That that is the position of the American Psychiatric
- 17 | Association, right?
- 18 A. That is the current position, yes.
- 19 Q. And, by the way, part of your job is to stay current with
- 20 | the standards of the American Psychiatric Association, right?
- 21 | A. Part of my job? You mean am I supposed to stay up-to-date
- 22 | with the literature? Is that what you are saying?
- 23 | O. Yes.

- 24 A. Yes, in general I do.
  - Q. You testified today that you have to stay current on the

- 1 research in your field to be valid and credible, right?
- 2 A. That is correct.
- 3 | Q. So to be clear, Dr. Greenfield, like the World Health
- 4 Organization, the American Psychiatric Association does not
- 5 | recognize Internet addiction as a disorder, right?
- 6 A. That is correct.
- 7 | Q. And it specifies that the features of Internet gaming
- 8 | disorder do not include general use of the Internet, correct?
- 9 A. That's correct.
- 10 | Q. And you are aware then that today disagreements still exist
- 11 | as to the etiology, epidemiology, diagnosis, and treatment of
- 12 | your theories of Internet addiction and use problems, correct?
- 13 A. I think there is some disagreement. I think there is
- 14 general agreement that there is an issue.
- 15 | Q. Agreement that there is an "issue" is not something that
- 16 | has been documented by the American Psychiatric Association in
- 17 | the DSM-5 or the World Health Organization in the ICD-11; is
- 18 | that right?
- 19 | A. That is correct. It takes a long time for stuff to end up
- 20 | in these nomenclatures.
- 21 | Q. Dr. Greenfield, you run a center focused on Internet
- 22 | addiction, right?
- 23 | A. I do.
- 24 | Q. And you advertise yourself as providing treatment to people
- 25 | with Internet addiction, right?

95 M6M5mel3 Greenfield - Cross

- 1 Α. I do.
- And you sell books about Internet addiction, right? 2 Q.
- 3 I wouldn't say I sell a lot of books, no. Α.
- Well, you have published books, right? 4 Q.
- I do publish books, correct. 5 Α.
- And those are for sale? 6 0.
- 7 Α. Yes.
- 8 Q. And you make money off of the sale of those books, correct?
- 9 Do you earn any money off of the sale of books?
- 10 I have earned a small amount of money, yes. Α.
- 11 And you have earned money from your private practice?
- 12 Α. That, I do, yes.
- 13 And you also earn money from providing expert testimony on
- Internet addiction like you are today, right? 14
- 15 Α. That is true, yes. Accurate.
- 16 Now, Dr. Greenfield, you believe that some people use the
- 17 Internet compulsively, right?
- 18 Α. I do.
- 19 In fact, you testified today that most people overuse the
- 20 Internet, right?
- 21 That is my belief. Α.
- 22 And you have identified what you view as compulsive
- 23 Internet users, right?
- 24 I'm not sure I understand your question.
- 25 You have identified people you view as compulsive Internet

M6M5mel3 Greenfield - Cross

1 users, right?

- 2 A. Are you asking me have I seen people in my practice that I
- 3 | diagnose or define as compulsive Internet users?
- 4 Q. Yes.
- 5 A. Yes.
- 6 Q. And you believe there is a concept of heavy Internet users,
- 7 | right?
- 8 | A. Yes.
- 9 Q. And Internet addicts, right?
- 10 | A. Yes.
- 11 | Q. But there is no way of knowing if a person is experiencing
- 12 | symptoms related to Internet addiction without evaluating an
- 13 | individual situation, right?
- 14 A. Ultimately, yes, you have to evaluate the person directly
- 15 to make a definitive diagnosis, yes.
- 16 | Q. And so you agree that any attempts at medical or
- 17 | psychiatric diagnoses, they must be performed in the context of
- 18 | a professional evaluation or consultation by a psychologist,
- 19 | psychiatrist, or other licensed mental health or addictions
- 20 professional, right?
- 21 A. I would agree with that.
- 22 | Q. You can't just assume someone is addicted to the Internet,
- 23 || right?
- 24 | A. You can't diagnose them with an Internet addiction without
- 25 | evaluating them; that's correct.

- 1
- And you can't assume someone is an Internet addict without 2 an evaluation being conducted, correct?
- 3 I would not diagnose somebody as definitively as having an
- 4 Internet addiction unless I evaluated them and I do specify
- 5 that in the book, that ultimately no matter how much the
- 6 evidence appears that way, they still need a final evaluation
- 7 by a person.
- Q. And that's because you have to conduct tests to diagnose 8
- 9 them, right?
- 10 Sometimes. It is more that you have to eyeball them.
- 11 have to ask them a lot of questions to really evaluate them.
- 12 Q. And part of what you do is you use tests that you have
- 13 created yourself, right?
- 14 A. Yeah. I don't use the tests a lot. I rely more on my
- 15 clinical interviews at this point but the tests are there, yes.
- They're in the book and I have used them. 16
- 17 So you publish tests about these diagnoses but you don't
- 18 use them in your clinical practice?
- 19 I don't routinely use them because I ask the same questions
- 20 in the course of my clinical interviews anyway. So I don't
- 21 hand them a piece of paper; they're in my office and I am doing
- 22 an initial workup which covers everything that is in those
- 23 tests.
- 24 Q. But you don't apply the standards set forth in those tests
- 25 to your clinical practice?

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- That's not what I am saying. I do apply those standards, I just don't hand them a piece of paper and say fill this out. 2
  - And those questions include things like: Do you find yourself seeking more stimulating video games?
  - That's -- yeah, that's one of the questions.
- And: Do you find yourself repeatedly seeking more 6 7 stimulating content on the Internet?
- Yup. 8 Α.
- 9 And one of those questions is whether someone has used 10 their smartphone to commit a crime; right?
- 11 I don't recall that question but I am sure it is accurate 12 that it is in there. I believe you.
  - Q. But really, Dr. Greenfield, you agree that you need to examine a person in a clinical setting in a professional way in order to form an opinion about them, right?
    - It would be unethical to diagnose a patient with anything without evaluating them directly. You can't do it by proxy or even a paper and pencil test and I specify that in the book.
    - Q. And it would be unethical, then, to also draw assumptions about a person's conduct if they hadn't been evaluated, right?
- 21 I don't -- well, you can have opinions about people's 22 behavior, you just can't definitively diagnose them.
- Well, you haven't examined the defendant in this case Ethan 23 24 Phelan Melzer; right?
  - I didn't hear what you said. Α.

M6M5mel3 Greenfield - Cross

- Q. You have not examined the defendant in this case, Ethan
  Phelan Melzer?
- 3 A. Correct, I have not evaluated him.
- 4 | Q. You never treated Ethan Melzer?
- 5 A. No.
- 6 Q. You don't know how much he uses the Internet, right?
- 7 A. I think I assume that he used -- at least did -- use it 8 quite a bit.
- 9 Q. So you have made assumptions about his Internet use?
- 10 A. I did make that assumption.
- 11 Q. You made that assumption without reviewing the evidence in
- 12 | this case, correct?
- 13 A. I -- I mean, I know something about the case so, I mean, I
- 14 do know that he did spend a lot of time on the Internet but I
- 15 did not do a formal evaluation of him.
- 16 Q. Dr. Greenfield, have you reviewed Mr. Melzer's Telegram
- 17 chat messages in this case?
- 18 A. I did review some of the messages in the case, yes.
- 19 Q. You believe you reviewed some but not all of the electronic
- 20 messages sent in this case?
- 21 A. I read a lot of -- I can't tell you whether I read
- 22 | everything because I don't know that for a fact and I don't
- 23 want to misrepresent.
- 24 | Q. You don't know, sitting here today, how much Mr. Melzer
- 25 used the Internet in May of 2020 compared to the average user,

Greenfield - Cross

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1 | correct?

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- 2 A. No, I can't make that comparison.
- Q. And you don't know if he has ever committed an act of
- 4 | violence, do you?
  - A. No, I do not know that.
  - Q. Would that be a factor in drawing assumptions about the defendant?
  - MS. WERNER: Objection.
    - THE COURT: You can answer the question.
- THE WITNESS: I'm sorry?
- 11 THE COURT: You can answer the question.
- 12 | THE WITNESS: I'm not sure I understand the question.
- 13 BY MS. RAVENER:
- Q. Would it be a factor in your assumptions about the defendant to know whether or not he had committed an act of violence in the past?
- A. If I were evaluating a patient and they committed an act of violence, if you are asking me would that go into the process of my evaluating them and my coming up with a diagnosis, the
- 20 answer is yes.
- 21 Q. Now, to be clear, because you didn't meet Mr. Melzer and
- 22 | you have reviewed only selected portions of evidence in this
- 23 | case, you can't diagnose Mr. Melzer as an Internet addict,
- 24 right?

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A. No, I cannot formally diagnose him.

Greenfield - Cross

- Q. And you can't diagnose him as a compulsive Internet user, right?
- 3 A. Nope.
- 4 | Q. And you can't diagnose him as a heavy Internet user, right?
- 5 A. Nope.
- 6 Q. But you, nonetheless, told defense counsel, based on your
- 7 | assumptions, that Mr. Melzer was a stupid kid who got in over
- 8 | his head, correct?
- 9 A. I do believe that. That's my opinion.
- 10 | Q. So you formed an opinion about the evidence in this case
- 11 | based on your own assumptions, correct?
- 12 A. My own opinions.
- 13 | Q. Dr. Greenfield, you are aware that there is going to be a
- 14 | trial in this case; right?
- 15 A. I -- yes, I am aware of that.
- 16 | Q. And you understand evidence will be presented at that
- 17 | trial, right?
- 18 A. I assume so, yes.
- 19 | Q. You have not seen all of that evidence, correct?
- 20 | A. I don't think so. I am assuming I haven't.
- 21 | Q. And so, even though you are assuming you have not reviewed
- 22 | all of the relevant evidence, you have never examined
- 23 Mr. Melzer, you have drawn conclusions and formed opinions
- 24 | about this case, correct?
- 25 A. I have an opinion, yes.

Greenfield - Cross

- 1 | Q. You formed that opinion as well without examining
- 2 Mr. Melzer's personal history, correct?
- 3 A. I know some of his history. I don't -- you are right, I do
- 4 | not know everything. That's true.
- 5 | Q. You know history about Mr. Melzer that was provided to you
- 6 by defense counsel; is that correct?
- 7 A. That is correct.
- 8 Q. And not from any information from Mr. Melzer himself,
- 9 | correct?
- 10 A. No, I talked to Mr. Melzer.
- 11 | Q. Oh, you did?
- 12 | A. Yeah.
- 13 Q. How many times did you talk to Mr. Melzer?
- 14 A. It was one time but it was about an hour and a half, I
- 15 | believe.
- 16 Q. I'm sorry, Dr. Greenfield, I thought your testimony earlier
- 17 | was that you had not evaluated the defendant.
- 18 A. I didn't evaluate him. I talked to him.
- 19 Q. And the purpose of talking to the defendant was not to
- 20 | evaluate him?
- 21 A. No, I was not doing an evaluation.
- 22 | Q. So your opinion is also based on Mr. Melzer's own
- 23 | representations to you about his conduct; is that right?
- 24 A. He made representations as to his Internet use patterns and
- 25 behavior, yes, and I suppose that would include his conduct;

Greenfield - Cross

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1 yeah.

- 2 | Q. I see. So that has been one of the factors that you
- 3 considered in forming your opinions, is the defendant's own
- 4 statements that were only disclosed to you and his lawyers; is
- 5 | that right?
- 6 A. That's part of what informed my opinion in addition to what
- 7 | I read.
- 8 | Q. Dr. Greenfield, you often review case files and documents
- 9 and offer your expert opinion related to Internet and
- 10 | technology use to assist in constructing a legal defense,
- 11 | correct?
- 12 A. No. That's not correct.
- 13 | O. OK.
- 14 A. I don't -- I don't believe I said that I do that often and
- 15 | I do it occasionally. I mean, I do not testify very often and
- 16 | I have probably done 10 cases in my career, maybe 12 total.
- 17 | didn't know if that qualifies as often.
- 18 Q. One moment?
- Dr. Greenfield, if I could ask you to look at
- 20 Government Exhibit 3 in your binder? And we will try to pull
- 21 | that up on the screen for everyone for efficiency.
- 22 | A. OK. Are you talking about the page from my website?
- 23 | Q. So first of all, Government Exhibit 3, you recognize this
- 24 as a series of excerpts from your website?
- 25 A. Yes.

Greenfield - Cross

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- Q. Let's turn to page 2 of the exhibit and I will direct you to paragraph 3 on that page --
  - A. OK.

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Q. -- where you represent to the public that you -- quote -- often review case files and documents and offer your expert opinion relating to Internet or technology use to assist in

Do you see that?

constructing a legal defense.

- A. I do see that.
- Q. Is it your testimony here today that your statements and representations on your website are incorrect?
  - A. I don't know how I would use the word "often." I mean, I have done it so -- I mean, I feel like you are splitting hairs so I don't really know how to answer you.
- Q. Well, Dr. Greenfield, I'm asking about your own statement and whether it's truthful.
- A. Yes. This website was constructed 12 years ago and,

  frankly, I have not read it probably since it was put up. So

  do I often do it? I don't know. I mean, I have done it enough

  to say that I have done it many times. Would I declare that a

  statement that would be equivalent to often? I don't know.

  Probably not but -- so maybe that's a misword in that
  - particular case. I don't know. I really can't answer that.
- Q. Would you say that 12 years ago you had less experience than you do now?

Greenfield - Cross

- 1 A. Possibly.
- 2 | Q. And you advertise that you help in achieving a reduction or
- 3 | elimination of sentences for criminal defendants; is that
- 4 | right?
- 5 A. Yeah. I have not done it -- I have done -- a lot of the
- 6 work that I do legally or have done has been with people who
- 7 | have gotten in trouble with looking at child porn online so I
- 8 often consult with the attorneys and the patients to help in
- 9 | those cases, so that's probably what I am referring to in that
- 10 case.
- 11 | Q. And so you help reduce and eliminate sentences for criminal
- 12 defendants accused of participating in child pornography
- 13 offenses?
- 14 A. I typically am hired or have been hired by the defense to
- 15 write a report that they will use to help in either the plea
- 16 component or the sentencing.
- 17 Q. And you describe yourself as a defense witness to legal
- 18 | counsel, correct?
- 19 A. In general I work more for the defense.
- 20 | Q. And as we just discussed, the majority of those cases, in
- 21 | your experience, relates to child pornography and sexual
- 22 | behavior, correct?
- 23 | A. I would say I have done more child porn cases than any one
- 24 category. The next category has been cases, like, these chat
- 25 cases. That's probably the second largest.

M6M5mel3 Greenfield - Cross

1 | Q. We will talk about what you mean by these chat cases.

- 2 A. OK.
- 3 | Q. Let's put that to the side.
- 4 A. OK.
- 5 | Q. You conducted a survey in 1999, right?
- 6 | A. I did.
- 7 | Q. That was before the creation of Facebook, correct?
- 8 A. Yeah. I actually don't recall when Facebook was created
- 9 but that may be true.
- 10 | Q. That was before the creation of Instagram, right?
- 11 A. That I know, yes.
- 12 | Q. Before the creation of Discord, right?
- 13 A. I believe so.
- 14 | Q. That was before the creation of Gab, right?
- 15 A. I believe so.
- 16 Q. That was before the creation of Telegram, right?
- 17 A. I'm fairly sure of that.
- 18 | Q. And, today, billions of people around the world use the
- 19 Internet all the time, right?
- 20 A. All the time.
- 21 | Q. You conducted this study more than 20 years ago, right?
- 22 A. Correct.
- 23 | Q. And I believe you previously testified here today that you
- 24 | viewed approximately nine to 15 years as extremely dated
- 25 | information, correct?

Greenfield - Cross

- A. I think that the -- I was referring to the DSM, yes, I do think the DSM is outdated.
- Q. And your study that you have been relying on here today, in substantial part, is even older; right?
- 5 A. It is older.
- 6 Q. The study was conducted on ABCnews.com, right?
- 7 | A. It was.
- Q. It was added to the ABC news website alongside their cover story on Internet use and addiction, right?
- 10 A. Well, that I actually don't recall that but that's very 11 possible.
- Q. Well, we want to get it right, Dr. Greenfield. Is that correct or not?
- 14 A. I can't answer that question.
- MS. WERNER: Objection.
- THE COURT: Thank you. I overrule the objection. I accept the answer.
- 18 You can proceed, counsel.
- 19 BY MS. RAVENER:
- 20 | Q. Well, we can take a look at what's been marked --
- 21 A. No, I believe you. I am just telling you I don't remember
- 22 | that so I don't want to misrepresent what I remember.
- Q. Dr. Greenfield, people chose to respond to the survey,
- 24 | right?
- 25 A. They did.

Greenfield - Cross

- 1 | Q. Right?
- 2 | A. Yes.
- 3 | Q. And people self-selected to answer your survey, right?
- 4 A. That is correct.
- Q. And so you know that the fact that the survey was posted
- 6 along with an article on Internet addiction may have yielded
- 7 some bias in the responses, right?
- 8 A. Yes, but we did factor that into the statistical analysis.
- 9 Q. Well, that's because anyone who may be having difficulty
- 10 | with their online use is likely to read a story about Internet
- 11 | addiction, correct?
- 12 A. More likely, yes. But I don't think that that's entirely
- 13 accurate because we only got a 6 percent number who met the
- 14 | criteria for addiction.
- 15 | Q. Dr. Greenfield, the description that I just gave you about
- 16 the potential bias in your study, do you recall that that
- 17 description is the description you published in your article
- 18 about the study?
- 19 A. I don't know what you are saying right now so could you
- 20 | clarify that, please?
- 21 | Q. So Dr. Greenfield, let's take a look at what's been marked
- 22 | as DG 4 at page 404. You testified earlier today that this was
- 23 the publication of your study; is that correct?
- 24 A. You mean the article that appeared in 1999?
- 25 | Q. Take a look at DG 4 and tell us if you recognize that.

Greenfield - Cross

- 1 | A. DG 4.
- 2 | Q. In your binder it will be labeled D4, I will ask you to
- 3 | turn to page 404, which is page 2 of the document.
- 4 A. Yes, I have it.
- 5 | Q. OK. And I would like to turn you to the right-hand side of
- 6 the page. Do you see that this is where you wrote -- and I
- 7 | quote -- the fact that the story was about Internet addiction
- 8 may have yielded some bias in the responses --
- 9 | A. Yes.
- 10 | Q. -- as we assumed that anyone who may be having difficulty
- 11 | with their online use is likely to read a story about Internet
- 12 addiction.
- 13 A. Uh-huh. Yes. I agree.
- 14 | Q. Well, you agree that that's true; correct?
- 15 | A. Yes, of course there may be bias, but self-selection
- 16 appears in all behavior science research.
- 17 | Q. Dr. Greenfield, I'm asking you is that what you published
- 18 | in your study.
- 19 A. Yes. Obviously. Because I'm reading it.
- 20 | O. And is it accurate?
- 21 A. Well, if it is written it is.
- 22 | Q. It was written by you, right?
- 23 A. It is. It was written by me.
- Q. Dr. Greenfield, the study examined, in part, unique factors
- 25 | involved with sexuality on the Internet; right?

Greenfield - Cross

- 1 A. Could you repeat that, please?
- 2 | Q. The survey -- the 1999 survey --
- 3 | A. Yes.
- 4 | Q. -- examined, in part, unique factors involved with
- 5 sexuality on the Internet; right?
- 6 A. Yes. That was some of the questions.
- 7 | Q. And it took only about 10 to 15 minutes to complete, right?
- 8 A. Yeah. In general, I think 15.
- 9 Q. And the survey asked, in essence, if people had ever lied
- 10 on the Internet, right?
- 11 A. Among other things, yes.
- 12 | Q. And even one lie counted, right?
- 13 A. Yes.
- 14 | Q. And any kind of lie counted, right?
- 15 | A. Yeah. We didn't specify what the lie was; that's correct.
- 16 | Q. And so, if you lied once about anything and you admitted it
- 17 on the survey then you count it as an Internet lie or for the
- 18 purposes of the study, right?
- 19 A. Yes.
- 20 | Q. And you did not differentiate between people who lied once
- 21 and people who had lied frequently, right?
- 22 | A. Actually, I don't know the answer to that so I don't want
- 23 | to misrepresent. I would have to look at the data to really
- 24 answer that question.
- 25 Q. OK. Well, let's take a look at Government Exhibit 6 in

Greenfield - Cross

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- 1 your binder and see if we can pull it up on the screen. I will
- 2 | ask you to look at page 176, lines 10 through 15. Do you
- 3 recognize this as a transcript of your testimony under oath in
- 4 United States v. D'Amelio in this court house?
- 5 A. Could you tell me the page again, please?
- 6 | Q. 176.

- 7 | A. OK. Got it.
  - Q. I ask you to look at lines 10 through 15 on that page.
- 9 A. Yes. That's pretty much what we just said.
- 10 | Q. Well, Dr. Greenfield, I believe you didn't answer the
- 11 question so let me ask it again.
- 12 | A. OK.
- 13 Q. You did not ask questions that would differentiate between
- 14 people that lie sometimes and always, right?
- 15 A. That is correct.
- 16 | Q. And in your survey, if somebody lied once or lied a lot
- 17 | there was no way of differentiating that in your survey, right?
- 18 A. Well, can I just, before I answer that, I know that's what
- 19 | it says here.
- 20 | Q. Well, hold on a second, Dr. Greenfield.
- 21 Was it your testimony in *United States v. D'Amelio --*
- 22 A. Yes. That's what it says.
- 23 | Q. -- that you did not differentiate?
- 24 A. That's what it says, correct.
- 25 Q. OK. And in that trial you were under oath the same exact

Greenfield - Cross

- 1 | way that you are under oath here today?
- 2 A. Absolutely.
- 3 Q. As part of your survey and analysis you tried to tell what
- 4 people lied about most often, right?
- 5 | A. Yes.
- 6 Q. And you found that people lied about their age?
- 7  $\blacksquare$  A. They do, yes.
- 8 | Q. They lied about their weight?
- 9 A. They do.
- 10 Q. They lied about their height.
- 11 A. They do.
- 12 | Q. They told a lot of lies about physical appearance, right?
- 13 A. Yeah, their life circumstance; job. That sort of thing.
- 14 | Q. They lied about how much money they earned, for example?
- 15 A. Education they lie about.
- 16 | Q. And no matter what they lied about, a white lie or a
- 17 | dangerous lie, you counted it the same way, right?
- 18 A. That is correct.
- 19 | Q. And you published the results of that survey, right?
- 20 A. Yes. Uh-huh.
- 21 THE COURT: Sorry. Is that a yes?
- 22 A. Yes. Sorry.
- 23 Q. And you tried to include all the findings of that survey in
- 24 | your publications, right?
- 25 A. Yes, I attempted to. You can't put everything in because

Greenfield - Cross

- we had tens of thousands of data points so you put in the pertinent points.
- 3 Q. Well, Dr. Greenfield, you have been testifying and talking
- 4 | publicly about the survey results for 25 years, right?
- 5 A. Yes.
- 6 Q. And you published the article that we just looked at,
- 7 | right?
- 8 A. Yes.
- 9 Q. You also published a book called "Virtual Addiction" and
- 10 another book called "Overcoming Internet Addiction for
- 11 Dummies, "right?
- 12 A. That's correct.
- 13 | Q. And your books also discuss the survey, right?
- 14 A. Yeah, they do, although my latest book doesn't really talk
- 15 about the survey a whole lot.
- 16 Q. It draws on the survey, correct?
- 17 A. Not in my opinion. It draws mostly on my clinical work
- 18 over the last 20 years. That was my attempt to do that.
- 19 Q. You have tried to include the salient interesting points
- 20 | from the survey in your publications and explanations of the
- 21 survey, right?
- 22 A. Certainly in some of my articles, yes.
- 23 | Q. And nowhere did you find that people lied about being a
- 24 criminal when they were really innocent, right?
- 25 A. OK. That, I lost you. So you are saying people --

Greenfield - Cross

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- Q. Your survey did not reveal when people lied and said they
  were a criminal when, in fact, they were innocent; right?
- A. I don't know that we asked that, so no. I would have no way of knowing that.
  - Q. And your survey didn't find that people lied about being a white supremacist when they really weren't, right?
    - MS. WERNER: Objection.
  - A. No.

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- 9 THE COURT: Sorry. You can answer the question. I
  10 accept the answer.
- 11 You can proceed.
- 12 A. We did not ask anything about white supremacy.
- 13 | Q. And your survey didn't expose that, right?
- 14 A. No.
- Q. And nowhere did you find that people lied about being a terrorist when they really weren't, right?
- 17 A. We did not ask that question.
- 18 | Q. You didn't make that finding, right?
- 19 A. We did not.
- 20 Q. But you found that about 50 percent of people admitted to
- 21 | you that they had told a lie on the Internet at some point in
- 22 | time, right?
- 23 A. That's correct.
- 24 | Q. And that's because telling some kind of a lie on the
- 25 | Internet is a very common experience, right?

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- A. I believe it is, yes.
- Q. And common lies continue to be about someone's physical appearance, right?
  - A. I say that that's among the more common lies, yes.
- Q. By the way, Dr. Greenfield, those people who said they were liars, admitted they were liars in your survey; for your
- 7 purposes you credited them as telling you the truth, right?
- 8 A. Yes.
  - Q. And you assumed that although they all lied online they were all telling you the truth when you gave them an online survey?
- 12 A. Yes, I did assume that.
- Q. And it's been your testimony here today that you assume
  everyone who goes online lies but you did not apply that
  assumption in evaluating the data in your 1999 survey, did you?
- 16 A. Well, that's not entirely true. We did put things in the
- 17 survey that would attempt to minimize lying. We can't
- eliminate it but we did try because we were aware, of course,
- 19 of what you are talking about that people lie a lot online so
- 20 maybe they would lie on the survey too. We just didn't think
- 21 that there would be any payoff in them lying on the survey as
- 22 opposed to when they're trying to garner a favorable impression
- 23 since we had no direct contact with the individuals, so our
- 24 assumption was there would be less motivation to lie.
  - Q. And that's because you assume that people tend to lie when

Greenfield - Cross

- 1 | they think they could gain something positive from it, right?
- 2 A. I think it is more likely that if they feel like it will
- 3 | put them in better stead to who they're lying to that it is
- 4 more likely they'll lie.
- 5 Q. Because they want to be casting themselves in a better
- 6 | light, right?
- 7 A. I would agree with that.
- 8 Q. Based on this survey of yours you decided that people lie
- 9 online more often than in real life, correct?
- 10 A. That's my belief, yes.
- 11 | Q. You decided that approximately 50 percent of users on the
- 12 | Internet admit to lying or misrepresenting facts online with
- 13 regularity, correct?
- 14 | A. Yes.
- 15 Q. And you decided that it is often difficult to separate
- 16 | reality from fantasy on the Internet, right?
- 17 A. That is correct.
- 18 | Q. You decided that the Internet is a forum where it can be
- 19 | difficult or impossible to discern what is true or real from
- 20 what is false, fictitious or fanciful, right?
- 21 A. I believe that to be true.
- 22 | Q. You decided that Internet users often assume their online
- 23 | speech has no real world consequences, right?
- 24 A. Well, I don't know that I would go that far but I think
- 25 | that that's -- I think people act as if there is no real world

Greenfield - Cross

- 1 consequences at times online, yes.
- 2 | Q. Well, Dr. Greenfield, let's be specific about that.
- 3 | A. OK.
- 4 Q. Are you familiar with the defense's notice of you in this
- 5 | case?
- 6 A. The defense's notice of me?
- 7 | Q. Are you aware that the defense has represented to the Court
- 8 | that your testimony will include that Internet users often
- 9 assume that their online speech has no real world consequences?
- 10 A. Yes, I did see that.
- 11 | Q. And that is not accurate; is that what you are saying?
- 12 A. No, I'm not saying it is not accurate. I think that there
- is an assumption that there is less likelihood that it will
- 14 | have real world consequences. I can't say that it is none but
- 15 | I would say it's much less.
- 16 | Q. And that's based on your opinion, right?
- 17 A. Absolutely.
- 18 | Q. You have decided that people using the Internet must be
- 19 | even more likely to engage in fantastical or role playing
- 20 behaviors and discussions, right?
- 21 A. That is true. It is a modality that really lends itself to
- 22 that.
- 23 | Q. Well, that's your opinion; correct?
- 24 A. Well, I don't think it is just my opinion but that is my
- 25 opinion.

Greenfield - Cross

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- Q. You draw those conclusions based on your 1999 study, correct?
- 3 A. Among other things, yes.
- 4 | Q. As well as your clinical practice, right?
- 5 | A. Yes.
- Q. Where you hold yourself out as an expert in Internet addiction, correct?
- A. Yes. It's also in addition to my review of the literature
  and my interaction at conferences with some of the preeminent
  experts -- actually many of the preeminent experts in the world
- Q. So let's talk about the literature. Right around the same time as your studies, other studies concluded that people lie just as frequently in person as you found they did online,

on this subject. So we do share data and information.

15 right?

- 16 A. I'm not familiar with that study but I believe you found
  17 something that says that.
- Q. Well, Dr. Greenfield, you were just telling us that your opinion is informed, in part, by your review of the relevant literature; right?
- 21 A. I did not read that particular study.
- Q. Well, in order to assess whether people lie more online
  than in real life you also need to know how often people lie in
  real life; right?
- 25 A. Well, yeah. I think I know what you are saying but that

119 M6M5mel3 Greenfield - Cross doesn't mean that one study that says that people lie -- I 1 don't agree with that finding but I did not read that 2 3 particular study so I can't tell you. 4 So let's be clear, Dr. Greenfield. You have not conducted Ο. 5 your own study on how often people lie in face-to-face interactions, correct? 6 7 That is correct. Q. And you have told us that you need to review the literature 8 9 in order to make sure what you say is valid and credible, 10 right? 11 Yes, I do review the literature, yes. 12 Q. But you don't review all the literature that disagrees with 13 you, right? 14 A. You cannot possibly read everything that's ever been 15 written on a subject. It is not -- not only is it not practical, it is not possible. 16 17 Q. Dr. Greenfield, you drew, you made a decision, you formed 18 an opinion that people lie more often online than in real life 19 without having data about how often people lie in real life in 20 face-to-face interactions, correct? 21 Α. That is true. 22 (Continued on next page)

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Greenfield - Cross

1	BY	MS.	RAVENER:
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- 2 And in fact, studies show that right around the same time Q.
- 3 that you conducted your study, people lied just as frequently
- 4 in person as you found they did online, right?
- 5 Well, that's what you're telling me.
- Well --6 Ο.
- 7 I haven't read that study, so -- but I believe you.
- OK. Have you been informed about a united -- sorry, a 8
- 9 University of Massachusetts psychologist who conducted an
- 10 experiment in 2002, approximately, and found that 60 percent of
- 11 people lie at least once during a ten-minute face-to-face
- 12 interaction?
- 13 A. Oh, I agree with you. People lie all the time. I just
- 14 think they lie more online.
- 15 MS. RAVENER: Your Honor, we would mark Government
- Exhibit 23, and we would ask that the Court take judicial 16
- 17 notice of that survey, that description of that study.
- 18 THE COURT: Thank you.
- Counsel for defendant. 19
- 20 MS. WERNER: I object. I haven't seen the study
- 21 they're talking about.
- 22 MS. RAVENER: This is a study that was provided
- 23 previously to defense counsel in our submissions.
- 24 THE COURT: Thank you.
- 25 Counsel for defendant, it's also, I understand, tab 23

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      in the government's binder.
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               MS. RAVENER: That's correct, Judge.
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               MS. WERNER: I would object to that being admitted,
      your Honor. Dr. Greenfield's testified --
 4
 5
               I apologize. May I remove my mask, your Honor?
               THE COURT: Thank you.
 6
 7
               Just a few brief responses.
 8
               First, please do use the microphone.
9
               Unfortunately, I can't allow you to take off your mask
10
              The rules allow me to do it so long as there's no
11
      witness in the box. And the witness and the questioner can do
12
      so. But unfortunately, I can't allow you to do that consistent
13
     with our rules.
14
               MS. WERNER: Understood, your Honor.
15
               THE COURT: The request is that I take judicial notice
      of it. Counsel for the United States is not taking the
16
17
     position that this witness is in a position to authenticate it.
18
               MS. WERNER: Understood, your Honor.
19
               THE COURT: Thank you.
20
               So what's your response?
               MS. WERNER: Your Honor, I still object to it coming
21
22
      in as to relevance.
23
               THE COURT:
                          Thank you.
24
               Is the basis for the objection relevance?
25
               MS. WERNER: Yes, your Honor.
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Greenfield - Cross

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1 THE COURT: Thank you.

2 I accept it. You can proceed.

MS. RAVENER: Thank you, your Honor.

- Q. And Dr. Greenfield, are you familiar with the Journal of
- 5 Basic and Applied Social Psychology?
- A. I'm familiar with the name. I don't subscribe to that particular journal.
  - Q. It's a peer-reviewed journal, correct?
- 9 A. Yeah. I'm assuming it is, yes.
- 10 Q. Dr. Greenfield --
- 11 A. It's not a main -- it's not one of the main journals, but
- 12 | I'm -- I've heard its name.
- 13 Q. Dr. Greenfield, Human Communication and Research, that's
- 14 | also a peer-reviewed journal in your field, right?
- 15 A. Yup, I've heard of that too.
- 16 | Q. And so you're aware that there's also been studies that
- 17 | show that on average Americans tell one to two lies per day
- 18 regardless of whether they're on the internet or in person?
- 19 A. I haven't read that study, but that does not surprise me at
- 20 | all.
- 21 | Q. And in fact, the same study showed that approximately 40
- 22 percent of people self-reported telling a lie in just a 24-hour
- 23 period, including in person and over the internet, right?
- 24 A. That does not surprise me.
- MS. RAVENER: Your Honor, on the same basis, we ask

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1 that the Court take judicial notice of Government Exhibit 24. 2 THE COURT: Thank you. Counsel for defendant. 3 4 MS. WERNER: Your Honor, I object. I don't believe 5 the government has established the reliability of this journal 6 article. They simply asked about it and ask the Court to take 7 judicial notice. 8 THE COURT: Thank you. 9 Counsel for the United States. 10 MS. RAVENER: Your Honor, Dr. Greenfield's confirmed 11 that this is a document from a peer-reviewed journal. 12 provided it to defense counsel as well as included it in our 13 briefing, and Dr. Greenfield's testimony is that it is 14 necessary to review the available literature in order to 15 validate his conclusions. We believe it's relevant for those 16 purposes. 17 THE COURT: Thank you. Understood. Counsel for defendant, any further argument? 18 MS. WERNER: Briefly, your Honor. 19 20 I don't take Dr. Greenfield to be saying that he is 21 familiar with these specific articles; simply that he's heard 22 the names of these journals. I don't think he is establishing 23 the reliability of these particular articles by any means. 24 THE COURT: Good. Thank you.

On the basis of that argument, I'm going to sustain

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Greenfield - Cross

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the objection both as to this and as to the prior exhibit, which I previously said I accept. But the defense has raised an objection beyond relevance.

Counsel, you can move on. I understand the point.

MS. RAVENER: Thank you, your Honor.

- Q. Dr. Greenfield, you're aware that studies show that most people think deception is prevalent on the internet, correct?
- A. I'm not familiar with a particular study, but I think -- in general, I would say you're correct that people assume that there is a fair amount of deception online.
- Q. Well, Dr. Greenfield, let's be specific. In connection with your preparation for this case, you provided defense counsel with a study that showed that people indeed held opinions that deception was prevalent on the internet and that it is easy to lie without being caught, correct?
- A. Yeah, that's accurate.
- Q. But studies show that there is actually a relatively low level of reported personal experience with online deception, correct?
  - A. I'm -- which study are you referring to? The --
- 21 Q. Dr. Greenfield, you provided defense counsel --
- 22 | A. No, no.
- 23 | 0. -- article?
- 24 THE COURT: I'm sorry. I'm sorry. Let counsel for the United States finish their question.

Greenfield - Cross

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1 Please go on.

- BY MS. RAVENER:
- 3 Q. Dr. Greenfield, you provided defense counsel with an
- 4 | article in connection with your preparation for testimony in
- 5 | this case?
- 6 A. Yes.

- 7 | Q. That stated that there is actually a relatively low level
- 8 of reported personal experience of online deception, correct?
- 9 A. I mean that's correct, but that doesn't surprise me.
- 10 Q. So the misconception that people hold is actually that
- 11 | lying is prevalent on the internet when, in fact, it is less
- 12 common than people think it is, right?
- 13 A. No, that's not what that's saying. I think that there may
- 14 be plenty of lying but that people may not believe that people
- 15 | are lying. I believe there's tons of lying that go on online,
- 16 | that goes on online.
- 17 | Q. Dr. Greenfield, you provided defense counsel with a link to
- 18 | an article published in a peer-reviewed journal called Cyber
- 19 | Psychology and Behavior, correct?
- 20 | A. Yeah, that's one of the journals that I published in as
- 21 | well.
- 22 | Q. And --
- 23 | A. I don't know which article you're referring to, though.
- 24 | Q. You provided defense counsel with an article entitled
- 25 | "Online Deception: Prevalence, Motivation, and Emotion,"

Greenfield - Cross

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1 | correct?

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- A. OK. Yes.
- 3 | Q. And if I can ask you to turn to page -- I'm sorry.

4 Turn to Government Exhibit 21, and look at page 58 of that

document. First of all, do you recognize this as the

6 | article --

- A. Yes.
- 8 | Q. -- that you supplied to defense counsel?
- 9 | A. Yes.
- 10 Q. OK. If I can ask you to turn to the first full sentence of
- 11 page 58, that article stated that: "People indeed held the
- 12 | opinion that deception was prevalent on the internet and that
- 13 | it is easy to lie without being caught. Most, however,
- 14 reported that they themselves did not deceive and that few, if
- 15 any, attempts were made by others to deceive them.
- 16 | Interestingly, despite the relatively low level of reported
- 17 | personal experience of online deception, people still hold the
- 18 | notion that online deception is widespread."
- 19 Do you see that?
- 20 | A. I do.
- 21 MS. RAVENER: Your Honor, we would offer Government
- 22 | Exhibit 21, which was supplied by Dr. Greenfield in this case
- 23 to the defense.
- 24 THE COURT: Thank you.
- 25 Counsel.

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M6mWmel4 Greenfield - Cross

1 MS. WERNER: No objection.

2 | THE COURT: Thank you.

I'm accepting it.

Please proceed.

## BY MS. RAVENER:

- Q. And so, in reality, Dr. Greenfield, studies show that people lie online approximately as often as they do in person,
- 8 | correct?

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- 9 A. Well, this study certainly says that.
- 10 Q. Dr. Greenfield, it's been your testimony that you also draw
- 11 on your clinical practice in forming your opinions, right?
- 12 A. Yes.
- Q. And again, you hold yourself out as a specialist in
- 14 | internet addiction, right?
- 15 | A. I do.
- 16 Q. And you ask your patients, almost all of them, I believe
- 17 | you said, about their internet use?
- 18 A. As part of a routine workup when I have a new patient, I
- 19 | ask about everything in their life, including their internet
- 20 use.
- 21 Q. And so when you review your files, you're looking primarily
- 22 | at people who have sought your help because they use the
- 23 | internet too much, right?
- 24 A. No, that's not correct, because about 30 to 35 percent of
- 25 | the patients I see don't have an issue with the internet, so

Greenfield - Cross

- 1 | they're seeking treatment for other psychiatric reasons.
- 2 | Q. But you still question them about their internet use?
- 3 A. I do, along with gambling, alcohol, drugs. Everything.
- 4 | Q. And that would still leave about 60 to 70 of your patients
- 5 who do come to you because they're seeking treatment for
- 6 | internet addiction or related --
- 7 A. That is correct.
- 8 | Q. So that would be the majority, right?
- 9 A. Definitely the majority.
- 10 | Q. To be clear, Ethan Melzer was not one of those people,
- 11 | right?
- 12 A. No, he was not a patient.
- 13 | Q. You met with him, right?
- 14 A. Yes.
- 15 | Q. You questioned him about the case, right?
- 16 A. Yes.
- 17 | Q. You questioned him about his internet use, right?
- 18 A. Correct.
- 19 | Q. But it's your testimony that you never evaluated him?
- 20 A. I did not.
- 21 | Q. You also use your own personal experience with the internet
- 22 | as a factor in forming your opinions, correct?
- 23 | A. In part, yes. It's not what I base my theories on, but
- 24 every person that publishes and every scientist that does
- 25 research is always looking at their own behavior in addition to

Greenfield - Cross

- 1 | the people that they study.
- 2 | Q. Well, that's your opinion, right, Dr. Greenfield?
- 3 | A. It is.
- 4 Q. There are some people who study individuals or behavior
- 5 | that they don't engage in themselves, right?
- 6 A. Oh, yes, of course.
- 7 Q. Whereas the behavior of internet use is something that's
- 8 common to everyone in this courtroom?
- 9 A. Absolutely.
- 10 | Q. Right?
- 11 A. Very much so.
- 12 | Q. And so you also apply your personal experience and opinions
- 13 | to your analysis, right?
- 14 A. Yes. But I would not say that that's what I base all of my
- 15 | conclusions on.
- 16 Q. Dr. Greenfield, you have not specifically conducted any
- 17 | studies on the use of Telegram, correct?
- 18 A. No, I have not.
- 19 | Q. You have not specifically conducted any studies on the use
- 20 of what's called encrypted applications, right?
- 21 A. No, I have not.
- $22 \parallel Q$ . You understand that those are platforms where users can
- 23 | communicate with additional privacy, right?
- 24 A. Yes, but ultimately trackable and traceable.
- 25 | Q. Well, Dr. Greenfield, you understand that not even the

Greenfield - Cross

- 1 hosting company can see the messages that they exchange, right?
- 2 A. That's correct. But they'll --
- 3 Q. End-to-end encryption, correct?
- 4 A. Yeah, I'm aware of it, and I've also seen ways that people
- 5 crack through it. So yes, but you're correct.
- 6 Q. You have not studied those people's behavior as applied to
- 7 | those particular encrypted platforms, right?
- 8 | A. No.
- 9 Q. And you have not studied how such behavior might compare,
- 10 | if at all, to other online behavior, right?
- 11 A. No, I have not.
- 12 | Q. And you haven't studied how that behavior might compare to
- 13 | off-line or in-person behavior, right?
- 14 A. That is correct.
- 15 | Q. And by the way, Dr. Greenfield, today people use the
- 16 | internet for work, right?
- 17 | A. Yes.
- 18 Q. Some people use it for remote work, right?
- 19 A. Yes.
- 20 | Q. And so there are people who have jobs where the work they
- 21 do is solely with people they've met online, right?
- 22 A. Yes.
- 23 | Q. And people use the internet for dating, right?
- 24 | A. Yes.
- 25 | Q. Making friends, right?

Greenfield - Cross

- 1 | A. Yes.
- 2 | Q. Keeping in touch and making plans with people they know,
- 3 | right?
- 4 A. All true.
- 5 | Q. And virtually everyone has a cell phone, right?
- 6 | A. Yes.
- 7 Q. And I believe that was your testimony earlier, that
- 8 | virtually everyone misses it when it's gone?
- 9 | A. Yes.
- 10 | Q. And that doesn't mean that we all aren't responsible for
- 11 | our behavior when using the internet, correct?
- 12 | A. I think we're always responsible for our behavior.
- 13 | Q. Dr. Greenfield, you testified earlier today that you,
- 14 | quote, can't know whether someone is lying on the internet
- 15 | because there is no way to validate it, right?
- 16 | A. Ultimately, you can never really prove a lie unless you
- 17 | have other sources of data to confirm it.
- 18 | Q. Well, Dr. Greenfield, you're aware that this is a criminal
- 19 | case, right?
- 20 A. Oh, yes.
- 21 | Q. And you're aware that there is going to be a criminal
- 22 | trial, right?
- 23 | A. I am.
- 24 | Q. And you expect that evidence will be introduced at that
- 25 | trial, right?

Greenfield - Cross

- 1 A. Yes, I do assume that.
- 2 Q. And you would expect that that evidence would address what
- 3 | happened in this case, right?
- 4 A. Yes.
- 5 | Q. And you would expect that that evidence would address
- 6 | whether information is a truth or a lie, correct?
- 7 A. I would assume so, yes.
- 8 Q. So you are not in a position to say whether or not the
- 9 jury, for example, can't know whether someone is lying because
- 10 | there's no way to validate it, right?
- 11 A. You ultimately cannot know whether somebody is lying or not
- 12 unless you have other sources of data to support that.
- 13 Q. And a criminal trial is designed to provide those other
- 14 | sources of data, isn't it?
- MS. WERNER: Objection.
- 16 THE COURT: You can answer the question.
- 17 | A. I -- I -- I mean I'm not an attorney, but I assume a
- 18 criminal trial is to present all the facts such that the jury
- 19 can draw their own conclusion.
- 20 Q. And Dr. Greenfield, you examined, you said, some of the
- 21 | chats in this case, right?
- 22 A. Yes.
- 23 | Q. But you didn't examine all of the --
- 24 A. I mean I can't tell you whether I examined all of them. I
- 25 did read through probably four or five hours' worth.

- Q. And you have not examined all the evidence in this case, right?
- A. No. I'm assuming that there's stacks of evidence that I haven't seen.
- Q. You haven't examined evidence supplied by the United States military, have you?
- 7 A. No, I have not. Well, I mean I don't -- I actually don't remember. I can't answer that question.
- 9 Q. You don't know what evidence you looked at and what you 10 didn't?
- 11 A. I don't -- I mean it's been a while since I looked at it,

  12 so I don't remember everything I've read.
- Q. But you expect that you weren't provided with all of the evidence, right?
- 15 A. I would assume that.
- 16 Q. And yet, again, you felt comfortable forming an opinion, 17 right?
- A. I'm not forming an opinion as to the defendant's guilt or innocence. I'm forming an opinion based on what I think is going on with his internet use. I'm not saying --
- Q. Dr. Greenfield, let's pause there. You are forming an opinion based on this defendant's internet use. Is that your testimony today?
- A. I'm talking about internet use in general. And then I have an opinion about -- yeah, I have an opinion about some of his

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Greenfield - Cross

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- internet use. I can't tell you whether he's innocent or 1 2 quilty, though.
- 3 Q. But your testimony is not that he's an internet addict, 4 right?
  - I can't define that because I didn't evaluate him.
- And your testimony is that he does not display any other 6 7 cognizable, recognized medical diagnosis related to the use of the internet, correct?
  - I have a hunch that he was a pretty good internet -- heavy internet user, but I can't define that definitively. say that definitively because I did not do a formal evaluation.
  - Q. And so, Dr. Greenfield, you're testifying in court here today based on your hunch, is that right?

MS. WERNER: Objection.

THE COURT: You can answer the question.

- A. No, I'm not -- I said that about a specific question you said. I'm certainly not here just talking about hunches. I think what I'm talking about is based on a lot of experience and a lot of science. I'm talking about the specific issue with regard to the defendant that you asked me about.
- The defendant you didn't evaluate? Q.
- I did not evaluate him for what -- I did not diagnose him and do a full evaluation, that's correct.
- 24 You testified about the idea of disinhibition, right? Ο.
- 25 Α. Yes.

- Q. You think disinhibition applies to everyone using the internet, right?
  - A. I think that it's a pretty universal construct, but not everybody. Not -- I would -- you know, based on my original research, a percentage of people experience it, but not
- 6 everybody.

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- Q. Disinhibition is the ability to express yourself in ways that you are not normally able to do, right?
- 9 A. Yeah, roughly.
- 10 Q. And it can be an exciting freedom to express yourself,
  11 right?
- 12 | A. Yes.
- Q. And in part, because of disinhibition, people express their innermost thoughts and feelings, right?
- 15 A. I don't know that for a fact, but I think that that's a reasonable statement.
- Q. Well, Dr. Greenfield, in your book, you published that
  statement -- that people express their innermost thoughts and
  feelings on the internet because of disinhibition?
- 20 | A. Yeah.
- 21 | Q. Is that right?
- A. I think that that's a reasonable thing to say, yes, but I
  can't tell you that that's -- I can't tell you definitively
  that everything that people talk about on the internet
  represents their innermost thoughts and feelings. But it is a

- 1 lot easier to express your innermost thoughts and feelings on the internet.
- Q. Dr. Greenfield, everyone reveals things about themselves or feeling judged or accountable on the internet, right?
  - A. I'm not sure what you're asking.
- 6 Q. Well, Dr. Greenfield, you've written that -- in a published
- 7 book, that everyone reveals things about themselves without
- 8 | feeling judged or accountable on the internet, right?
- 9 A. I think that that's a common experience, yes, especially on
- 10 chats and social media platforms.
- 11 Q. And that's because on the internet, in your view, the
- 12 | normal self-control and filtering that occurs in the real-time
- world is absent, right?
- 14 A. Yes.

- 15 | Q. You can go ahead and reveal aspects of your life which you
- 16 | might not ordinarily share with anyone, not even a spouse,
- 17 || right?
- 18 | A. Yes.
- 19 Q. And by the way, Dr. Greenfield, that would be especially
- 20 | true for people who wanted to do deeply unpopular things,
- 21 | right?
- 22 | A. I -- I can't say that I know -- I mean I suppose. I don't
- 23 | know that for a fact, but I would -- if you're asking me can
- 24 | people -- well, tell me what you're asking me, because I want
- 25 | to make sure that I answer it accurately.

Greenfield - Cross

- 1 | Q. Well, Dr. Greenfield, we were talking about disinhibition.
- 2 A. Correct.
- $3 \parallel Q$ . Right?
- 4 | A. Yes.
- Q. And how, on the internet, people feel free to reveal
- 6 aspects of their life which they might not ordinarily share,
- 7 | even with people very close to them, right?
- 8 | A. Yes.
- 9 Q. And that would be especially true for people who wanted to
- do things that other people might disapprove of, right?
- 11 A. I don't know that for a fact. I think that's -- that's a
- 12 | theory based on what you're saying. But you're -- what you're
- 13 | saying is that they would use the internet platform because of
- 14 | its anonymity and the disinhibition if they had a desire to
- 15 | talk about or do something that would be unacceptable or
- 16 | illegal or -- is that what you're saying?
- 17 | Q. Sure.
- 18 A. I don't know that to be true.
- 19 Q. Well, Dr. Greenfield, if a person had a space like the
- 20 | internet where they could be -- have an exciting freedom to
- 21 | express themselves --
- 22 A. Yes.
- 23 | Q. Right?
- 24 | A. Yes.
- 25 | Q. -- in an anonymous way, or what they thought was

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Greenfield - Cross

- 1 anonymous --
- 2 | A. Yes.
- $3 \parallel Q$ . Right?
- 4 A. Right.
- 5 Q. -- that would be especially true for someone, for example,
- 6 who wanted to join a hate group?
- 7 A. I think that the internet allows a sense of anonymity and
- 8 | freedom that is not experienced in other modalities.
- 9 Q. And so that would be especially appealing to someone who
- 10 wanted to commit acts of violence with a hate group, right?
- 11 A. It might be.
- 12 | Q. You know that research has shown that internet anonymity
- 13 enhances self-disclosure and honesty, right?
- 14 A. It -- yes, it does. It also facilitates people lying. So
- 15 | I don't know how to square those two things, but I hear you.
- 16 Q. Well, Dr. Greenfield, is it true that research has shown
- 17 | that internet anonymity enhances self-disclosure and honesty?
- 18 A. It does.
- 19 Q. And Dr. Greenfield, you also talked about accelerated
- 20 | intimacy, correct?
- 21 | A. I did.
- 22 | Q. And you think that accelerated intimacy is something that
- 23 | happens to a lot of people using the internet, right?
- 24 | A. Yes.
- 25 | Q. Almost everyone, right?

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Greenfield - Cross

- 1 A. It's a frequent experience.
- 2 Q. And you know many individuals who establish successful
- 3 | relationships with people they met over the internet?
  - A. Oh, yes, I do know that.
- 5 | Q. And you know, because it's your theory, that people --
- 6 because people communicate on the internet through typewritten
- 7 messages, they will reveal aspects of themselves to others in a
- 8 more open and forthright manner, right?
- 9 A. Yes, that's true, but those -- the data also shows that
- 10 | relationships that start online or marriages that start online
- 11 | are no better off as a result of that. In other words, they
- 12 have the same result of dissolution and divorce.
- 13 | Q. That's not my question, Doctor.
- 14 A. OK. Well, then ask it again.
- 15 | Q. Let me ask it again.
- 16 A. I'll try better.
- 17 | Q. It is your theory that because people communicate on the
- 18 | internet through typewritten messages, they will reveal aspects
- 19 of themselves to others in a more open and forthright manner,
- 20 correct?
- 21 A. That is accurate.
- 22 | Q. And in fact, there appears to be a greater trust and
- 23 perceived honesty in what is communicated when it is written as
- 24 opposed to other forms of communication, correct?
- 25 A. Yes, I believe I said that.

Greenfield - Cross

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- 1 Q. Dr. Greenfield, people also use the internet to commit
- 2 | illegal acts while hiding their identity, correct?
- 3 | A. Yes.

- 4 Q. Acts like bomb making?
  - MS. WERNER: Objection.
- 6 THE COURT: Thank you.
- 7 You can proceed, counsel.
- A. I mean I have not been involved in that, but I'm assuming that that's true.
- 10 | Q. Well, I don't want you to draw any assumptions,
- 11 Dr. Greenfield. Let's look at DG 0, defense exhibit 9, page
- 12 | 40. Do you recognize that as your manuscript?
- 13 A. Say it one more time. Where am I going?
- 14 | Q. D9 at page 40.
- 15 | A. OK. I got it.
- 16 | Q. OK. And do you see before the break in the heading -- this
- 17 | is your book, right, or a manuscript of yours?
- 18 A. Oh, yes. You're referring to the sentence where I say --
- 19 but I'm using that as an example. I'm not specifically saying
- 20 | that that occurred or that I was aware of that occurring.
- 21 | Q. Well, Doctor, this is your book, right?
- 22 | A. Yes, it is.
- 23 | Q. And you tried to publish accurate things in the book,
- 24 right?
- 25 A. Yeah.

Greenfield - Cross

- 1 Q. So you wrote in your book: "I'm sure that the net privacy
- 2 has also contributed to the popularity of many websites,
- 3 including gambling, adult shopping sites. There are darker
- 4 | sides to anonymity, such as in the case of protecting illegal
- 5 or antisocial acts, like bomb making."
- 6 A. Yes.
- 7 || Q. Right?
- 8 A. I agree with that.
- 9 Q. And you wrote that in your book about Virtual Addiction,
- 10 | right?
- 11 A. I did do that.
- 12 | Q. And Doctor, you're aware of cases where people have used
- 13 the internet to carry out violent acts, including murder and
- 14 | rape, right?
- 15 A. Yes, I am aware of that.
- 16 | Q. And by the way, Doctor, people sometimes tell lies online
- in order to commit crimes, correct?
- 18 A. I -- I would have to assume that that's correct, yes.
- 19 Q. Dr. Greenfield, you also testified today that internet use
- 20 delivers a dopamine hit to a person's brain, correct?
- 21 | A. Yes.
- 22 | Q. And you testified that that happens to everyone, right?
- 23 A. Yes. I mean I didn't examine everybody, but I think it's a
- 24 | fairly safe assumption.
- 25 | Q. And dopamine is a neurotransmitter that makes people feel

Greenfield - Cross

- 1 | pleasure, right?
- 2 A. Yeah.
- 3 Q. Makes them feel happy?
- 4 A. It's an excitatory neurotransmitter, yes.
- 5 Q. And it makes people feel happy, right?
- 6 A. Happy or just lifted slightly. I mean it doesn't make
- 7 people walk around giddy and, you know, laughing and smiling.
- 8 | Q. It's a good feeling, correct?
- 9 A. Definitely a better feeling than other things.
- 10 | Q. And you testified that when someone even gets in their car
- 11 | to head to a casino, if they're the kind of person who enjoys
- 12 going to a casino, they're going to feel a dopamine hit right
- 13 then and there, right?
- 14 A. You bet.
- 15 | Q. Just for the anticipation, right?
- 16 A. That is correct.
- 17 | Q. And so it's also true that if someone is planning to go
- 18 conduct a bank robbery and they get in the car to do it,
- 19 | they're going to feel a dopamine hit too, correct?
- 20 A. I suppose so.
- 21 | Q. And so, in your view, if a person is using the internet to
- 22 | consistently view material relating to violence, that will give
- 23 | them pleasure, right?
- 24 A. No, I can't assume that, because I don't know -- that's
- 25 assuming that they develop pleasure from violence.

Greenfield - Cross

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- Q. Well, Dr. Greenfield, isn't it your testimony that internet use for all of us delivers a dopamine hit to the brain?
- 3 A. It does.

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- Q. And so a person's selected content will deliver that pleasurable feeling for them, right?
- A. I suppose if the person was excited or elated from acts of violence or criminal behavior, that that would be the case.
  - Q. And so, for someone, for example, who wanted to carry out acts of violence or engage in criminal behavior, seeing violence on the internet would give them pleasure, right?
  - A. Yes, I believe that's true.
- Q. And seeing even more extreme violence would give them additional pleasure, right?
- 14 A. I think that's a reasonable assumption.
- Q. Dr. Greenfield, in your opinion, posting content on the internet and receiving social validation also increases dopamine levels, right?
- 18 A. Yes, very much.
- Q. And to be clear, you have not personally conducted any study that shows the transmission of dopamine in response to internet use, correct?
  - A. Well, the only way you can do a study like that is through a scan, and I've not done a scan study. I've read the scan studies, but I've not done them.
  - Q. You have not conducted --

Greenfield - Cross

- 1 A. I have not conducted a scan study.
- 2 Q. And you wouldn't be authorized to conduct such a study,
- 3 because you're not a medical doctor, right?
- 4 A. No, that's actually not true. I mean I'm not a medical
- 5 doctor, but psychologists do scan studies all the time.
- 6 Q. But without conducting a study of your own, you've decided
- 7 | that compulsive internet use causes quasi involuntary behavior,
- 8 | right?
- 9 A. Yes. I -- I mean I'm not sure -- in what context are you
- 10 asking that question? Can you rephrase the question? Sorry.
- 11 | Q. Doctor, is it your opinion that -- have you decided that
- 12 compulsive internet use, in your view, causes quasi involuntary
- 13 | behavior?
- 14 A. I think that it -- yeah. I mean I think it -- it feeds
- 15 | unconscious or more automated behavior, yeah. So I guess that
- 16 | would be quasi -- the word you used, yeah.
- 17 | Q. Well, you're aware that the defense has represented that
- 18 | you're going to speak about that in this case, right?
- 19 A. Yes, I am aware of that.
- 20 Q. OK. What study is that based on?
- 21 A. I don't know what study that's based on particularly. I
- 22 | think that --
- 23 Q. Dr. Greenfield, I don't have a question pending. Please
- 24 wait for the question.
- 25 A. OK. Sorry.

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Greenfield - Cross

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- Q. Dr. Greenfield, without conducting a study to examine the brain, you've also decided that the internet causes the clouding of a user's judgment, right?
  - A. Yes, I do assume that. Not in every case, but I think that it does cloud people's judgment based on my experience with the people that I've worked with.
- 7 | Q. And you think that's true for everyone?
- A. No, I can't say it's true for everyone, because I've not evaluated everyone.
- 10 | Q. And you haven't evaluated the defendant, correct?
- 11 A. I have not evaluated the defendant.
- 12 | Q. So you can't say it's true for him --
- 13 | A. I cannot.
- 14 | Q. -- correct?
- 15 A. No, I cannot.
- Q. By the way, Dr. Greenfield, you've offered these opinions

about the clouding of judgment or involuntariness of someone's

- 18 response, for example, in a lawsuit brought against Apple, is
- 19 | that right?
- 20 | A. Yeah, I was asked, I think, to comment on -- I mean that
- 21 was a long time ago. I don't even remember what I said in that
- 22 case.

- 23 Q. That case has an opinion from 2017, which was five years
- 24 ago, is that right?
- 25 A. Yeah.

Greenfield - Cross

- 1 | Q. Long time for you?
- 2 A. It is when you're 66.
- 3 | Q. A lot more recent than your 1999 study, though, correct?
- 4 A. Apparently. I don't even remember doing it, but I -- I
- 5 know that there was a lawsuit against Apple. I don't think it
- 6 went anywhere.
- 7 Q. Well, you provided an opinion that a distracted driver was
- 8 | not responsible for their conduct because when she received a
- 9 | notification on her iPhone, she responded to an automatic
- 10 | neurobiological compulsion to read the message. Do you recall
- 11 providing --
- 12 | A. Yes.
- 13 | Q. -- that opinion?
- 14 A. And I think that does occur.
- 15 | Q. Yeah. And you said that lawsuit didn't go anywhere, is
- 16 | that right?
- 17 | A. I don't know where it went. I was never told after that.
- 18 | Q. Yeah. Well, that's because the court determined that those
- 19 allegations were clearly frivolous and advanced a claim or a
- 20 defense that was not legally sufficient on their case, correct?
- 21 MS. WERNER: Objection.
- 22 THE COURT: Thank you.
- 23 | A. I actually --
- 24 THE COURT: Sorry.
- 25 You can answer the question.

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Greenfield - Cross

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1 THE WITNESS: OK.

- A. I was not aware of that outcome.
- 3 | Q. Are you aware of it now?
  - A. Because you told me.
  - Q. Would you like to take a look at the opinion?
- 6 A. No. I believe you.
- 7 MS. RAVENER: Your Honor, I'd like to provide the cite 8 to the Court.
  - THE COURT: Thank you.
- MS. RAVENER: This is Meador v. Apple, Inc. The cite is 2017 WL 3529577. And Dr. Greenfield's opinions are
- 12 discussed at approximately page 5.
- 13 Q. Dr. Greenfield, you've also decided, without any
- 14 examination of the brain yourself, that the internet causes the
- 15 loss of one's ability to discern fantasy from reality, is that
- 16 | right?
- 17 A. Well, I do -- not in everybody, but it has the capacity to
- do that, yes. And I don't know what you mean by not examining
- 19 the brain. You mean, like, doing dissections of people's
- 20 | brains, or you're --
- 21 Q. Well, we talked, for example, about scan studies, and you
- 22 haven't conducted one, right?
- 23 A. But a scan study is not going to necessarily show that.
- 24 Those are behavioral constructs that won't show up in a scan
- 25 study.

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- Q. And those are behavioral constructs that are pretty hard to apply to all people, right?
- A. I would say that there's no behavioral construct that applies to all people.
- Q. And so you can't say, for example, that using the internet causes the loss of one's ability to discern fantasy from reality for all people, right?
  - A. No, you cannot say that for all people.
- 9 Q. And in order to draw a conclusion like that, you would have to actually evaluate someone, right?
  - A. Yes. To make a comment about that particular person, you would have to evaluate them.
    - Q. Which, by the way, there is no diagnosis, as we established earlier, that's been recognized by the World Health
      Organization or by any other known body, like the American
      Psychiatric Association, that would allow you to make that
    - A. That that is correct in terms of the nomenclature, but that does not mean that people don't diagnose internet addiction problems.
    - Q. And Dr. Greenfield, you have not been able to conduct any evaluation that would allow you to opine that the loss of one's ability to discern fantasy from reality was present in this case for this defendant, right?
  - A. That is correct.

conclusion, right?

Greenfield - Cross

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- Q. And as we discussed, it would be impossible for you to apply that conclusion to people generally, right?
- A. I don't think you can ever make a comment in science about every single person.
  - Q. So, Dr. Greenfield, you called the maybe factor the idea that social media users post online without knowing what content would be rewarded or validated, right?
- 8 A. Yes.

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- Q. And as we just established, that's not something you can apply to all people because that wouldn't be responsible science, right?
- 12 A. Yeah, I suppose.
- Q. But if that did happen, your view is that happens even when people post entirely true and accurate statements, right?
- 15 A. I'm not following you. I'm sorry.
- Q. Even when people post a wholly true and accurate statement about themselves online --
- 18 | A. OK.
- 19 Q. -- the maybe factor of not knowing what content will be 20 rewarded and validated still happens --
- 21 | A. Oh, yeah.
- 22  $\parallel$  Q. -- in your view?
- A. I would agree. It doesn't matter whether the content is true or not.
  - Q. And that's true even when they post online to groups of

Greenfield - Cross

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people who are identified to them as their friends on social media, right?

- A. I suppose so. I don't think it matters whether they're
- 4 | friends or not. I think it has -- I mean although that might
- 5 increase the saliency; I think it's just the recognition and
- 6 acknowledgment that increases it.
- 7 | Q. You also testified about role playing --
- 8 | A. Yes.

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9 Q. -- is that right?

And you testified that role playing is taking on an identity that is different from the reality of your life,

- 12 || right?
- 13 | A. Yeah.
- 14 | Q. That's the definition, right?
- 15 A. Essentially, yeah.
- Q. OK. And you have never done any specific research on role playing on the internet?
- 18 A. Not specific to just role playing, no.
- 19 Q. And you have not personally gathered any statistics about
- 20 how often people role play on the internet, right?
- 21 | A. No.
- 22 Q. You have no idea what percentage of people online are
- 23 engaged in role play, right?
- 24 A. Yeah. I mean I wouldn't be prepared right now to give that
- 25 | number, no.

Greenfield - Cross

- Q. And you know that pretending to be someone else is relatively uncommon on the internet, right?
- 3 A. I mean I don't know that. You're -- you're telling me
- 4 that. You must be basing it on something. I don't know that
- 5 | for a fact, but I'm not shocked by that.
- 6 Q. You are not surprised to learn, for example, that studies,
- 7 | including one of the studies you provided to the defense,
- 8 stated that pretending to be someone else is relatively
- 9 uncommon on the internet, right?
- 10 A. Yeah, I think that's -- I mean it wouldn't surprise me.
- 11 | Q. And for the record, I'll note that that statement is
- 12 contained in Government Exhibit 21, which has been received by
- 13 | the Court at page --
- 14 A. Most of the time what I see is people -- they -- they don't
- 15 change their name and identity. They just change a lot of
- 16 | features about themselves.
- 17 Q. And by the way, Dr. Greenfield, you view any lie about
- 18 | their identity as role play, is that right?
- 19 A. Yeah, I think that that falls into the category. I mean
- 20 II --
- 21 | Q. And we saw, Dr. Greenfield --
- 22 MS. WERNER: May he finish his answer, your Honor?
- 23 THE COURT: Thank you.
- Did you have more to say, Dr. Greenfield?
- 25 | THE WITNESS: Yeah. I don't think that necessarily

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Greenfield - Cross

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telling someone you weigh 160 pounds when you really weigh 180 1 2 falls, means that you're necessarily role playing, although you 3 could argue that. I think that playing a role is sort of 4 taking on a character that is substantively different than who 5 you actually are. I suppose it's a -- it's a factor that moves 6 in that direction. 7 BY MS. RAVENER: Q. Well, Dr. Greenfield, I believe you testified earlier today 8 9 that any lie about your identity would be, in your view --10 Α. In a sense it is --11 THE COURT: I'm sorry. Let me just make sure that the 12 reporter got the full question. 13 THE WITNESS: Sorry. 14 THE COURT: Please, counsel. 15 THE WITNESS: I agree that there's --16 THE COURT: I'm sorry. 17 THE WITNESS: Sorry. 18 THE COURT: Let's just wait for counsel. BY MS. RAVENER: 19 20 Q. Dr. Greenfield, I believe you testified earlier today that 21 any lie about your identity would be, in your view, role play? 22 It is a form of role play, but I don't know that it 23 involves -- it rises to the level where someone has taken on a 24 whole new identity.

THE COURT: Counsel, let me just apologize. I'd like

A. I do recall.

M6mWmel4

Greenfield - Cross

	M6mWmel4 Greenfield - Cross
1	to take a short break just to let everyone stretch their legs
2	at some point. We don't need to do that at this very moment,
3	but if you could be looking for a reasonable place for a
4	natural break, I'd appreciate it.
5	MS. RAVENER: Yes, your Honor. I believe that I may
6	have about 15 minutes left.
7	THE COURT: Thank you.
8	So is this a reasonable break point, counsel?
9	MS. RAVENER: That's fine.
10	THE COURT: Good.
11	So, counsel, I'm going to propose that we take just a
12	five-minute break to let everyone stretch their legs.
13	Dr. Greenfield, during this recess, as before, I'm
14	directing that you not discuss this case or your testimony in
15	it with anyone.
16	I'll see you all back here in about five minutes.
17	Thank you.
18	(Recess)
19	THE COURT: Thank you. Please be seated.
20	So we're back on the record after a short recess.
21	Counsel for the United States, you can proceed.
22	MS. RAVENER: Thank you, your Honor.
23	Q. Dr. Greenfield, when we left off, we were talking about
24	role playing. Do you recall that?

Greenfield - Cross

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- 1 Q. And you haven't done any research on role playing in
- 3 | A. I'm not --

person, right?

- 4 Q. You're aware that people gather --
- 5 A. Oh.

- 6 Q. -- to do role playing in person, right?
- 7 A. No. I have not done research on that, but I am aware of 8 that.
- 9 Q. And you have no idea how often people gather in person to 10 role play in real life, right?
- 11 A. No, I don't know that -- those statistics.
- Q. You haven't written any peer-reviewed articles regarding role play on the internet, right?
- 14 A. Not solely on the role play, no, but I did include it in some of my work.
- Q. And nonetheless, without knowing how often people role play
  in real life, you formed the opinion that people must role play
  more often on the internet, correct?
- 19 A. You're saying that -- I would say that it's much -- yeah.
- 20 Yes. That is a conclusion that I would come to. I don't know
- 21 that for a fact in the sense that I've not evaluated in the
- 22 world how many times people do role playing in person, but I do
- 23 think it's a reasonable assumption that people do it more
- 24 | frequently, more easily online.
- 25 Q. And that's an assumption, right?

Greenfield - Cross

- 1 | A. It is. Absolutely. It's an educated assumption.
- 2 | Q. And Dr. Greenfield, you have treated patients, and that's
- 3 part of your basis for understanding role play, right?
- 4 A. Yes, part of it.
- 5 Q. But you have not treated any patients who have role played
- 6 as a terrorist seeking to kill Americans, have you?
- 7 A. No, I have not.
- 8 | Q. Never came up, right?
- 9 A. Nope. I don't think so.
- 10 | Q. You're not aware of any particular web forums where people
- 11 go in order to pretend to be a terrorist seeking to kill
- 12 Americans when they're really not one, right?
- 13 A. I'm not aware of any.
- 14 | Q. And instead, your work focuses on role playing primarily
- 15 | involving cyber sex, correct?
- 16 A. No. No. I would say the role playing often involves video
- 17 game characters, some with -- a lot of it with sex, but not all
- 18 of it. A lot of it is anime acting, animal acting, historical
- 19 characters, very --
- 20 | Q. You hold yourself out --
- MS. WERNER: Objection.
- MS. RAVENER: Excuse me.
- 23 | THE COURT: You can proceed, counsel.
- 24 BY MS. RAVENER:
- 25 | Q. You hold yourself out as specializing, as we discussed, in

Greenfield - Cross

- internet addiction and sexual addiction in particular, right;
  sexual behaviors?
- A. Well, people tend to get themselves into a lot of difficulty sexually online.
- Q. OK. And you found that if you engage in online cyber sex, you are probably much more likely to have a real-time affair off-line, right?
- 8 A. Yeah, that was one of the statistics that we found.
- 9 Q. You found a clear correlation between, for example, cyber 10 sex online and then carrying out that very activity, right?
- 11 A. Yes. It was -- I mean not -- it's not a 100 percent

  12 correlation. I think it was 30 percent more likely, and I may

  13 be misquoting the number.
- 14 Q. You called it a clear correlation in your book --
- 15 | A. Yes.
- 16 | Q. -- right?
- 17 A. Yes, that's true.
- 18 | Q. And a progression from virtual sex to actual sex, right?
- 19 A. Yes.
- Q. And in other words, people often carry out their online plans in real life, right?
- A. No, that's not what I'm saying. What I'm saying is that
  when it comes to sex, there is a higher likelihood that people
  will engage in real-time sexual behavior or approaching
  real-time sexual behavior if they start out online.

Greenfield - Cross

- Q. And that's because there is a clear correlation between cyber sex and what they do off-line, right?
- 3 A. That is correct.
- 4 | Q. And cyber sex is one of the things you study a lot, right?
- 5 A. Yeah. I would say that's true.
- Q. And as we established, terrorism is not something that you study a lot, right?
- 8 | A. I would not hold myself as an expert in terrorism.
- 9 Q. You have never written, published, or presented on any
  10 nexus between heavy internet use and white supremacists, right?
- 11 | A. No.
- 12 | Q. You've never written, published, or presented on any nexus
- 13 between heavy internet use and terrorism-related activity,
- 14 | right?
- 15 A. No, I have not.
- 16 | Q. You've never treated someone who was a member of ISIS,
- 17 || right?
- 18 | A. No.
- 19 | Q. You've never treated someone who is a member of Al Qaeda?
- 20 | A. No.
- 21 | Q. You've never treated someone who is a member of a white
- 22 | supremacist terrorist group, like the Ku Klux Klan, correct?
- 23 A. Correct.
- 24 | Q. And as an expert on the internet, surely you're aware that
- 25 | terrorists and terrorist organizations make significant use of

Greenfield - Cross

- 1 | the internet for real-world purposes, right?
- 2 A. I am aware of that.
- 3 Q. You're aware that they use the internet for recruiting,
- 4 | right?
- 5 | A. Yes.
- 6 Q. You're aware that they use the internet for financing,
- 7 | right?
- 8 | A. Yes.
- 9 | Q. For training, right?
- 10 A. I was less aware of that, but that doesn't surprise me.
- 11 | Q. Or incitement to commit acts of terrorism, right?
- 12 A. I -- I would -- that, again, doesn't surprise me.
- 13 | Q. And terrorists and foreign terrorist organizations and
- 14 domestic terrorists, they all use the internet also for
- 15 gathering and disseminating information and -- excuse me,
- 16 | gathering and disseminating information for terrorist purposes,
- 17 | right?
- 18 A. I -- yes, I would agree with that.
- 19 Q. And domestic and foreign terrorists use the internet for
- 20 disseminating information for purposes that include material
- 21 | support for planned acts of terrorism --
- 22 MS. WERNER: Objection.
- 23 || Q. -- right?
- MS. WERNER: Your Honor, he's testified that he's not
- 25 an expert in the --

Greenfield - Cross

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1 BY MS. RAVENER:

- 2  $\parallel$  Q. You are not aware of that?
- 3 A. Not in the sense that I have studied it extensively myself,
- 4 but.
- 5 Q. Dr. Greenfield, you are here as an expert on Internet use
- 6 and behavior, right?
- 7 A. Right.
- 8 Q. And so it is your testimony that you are not familiar with
- 9 | the use of the Internet for providing information that includes
- 10 material support for planned acts of terrorism?
- 11 A. Well, I'm not an expert in terrorism but if you are asking
- 12 | me am I aware that people use the Internet for nefarious acts,
- 13 of course, yes, they do.
- 14 | Q. Are you familiar with the United Nations Office on Drugs
- 15 | and Crimes' report on use of the Internet for terrorist
- 16 | purposes?

- 17 A. I have not read the report.
  - Q. Are you familiar with the report?
- 19 A. I have heard of it but I have not read it.
- 20 Q. You have heard of the report.
- 21 And you are then familiar about the fact --
- MS. WERNER: Objection.
- 23 THE COURT: You may proceed, counsel. Ask the
- 24 question.
- 25 | Q. -- that the Internet is used for terrorist purposes?

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Greenfield - Redirect

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- 1 Again, that does not surprise me; yes. I am aware that it is used for terrorism. 2 3 Including committing acts of terrorism, right?
  - Yes, including that. Α.

MS. RAVENER: One moment?

(Counsel conferring)

MS. RAVENER: No further questions.

THE COURT: Thank you.

Counsel for defendant?

Internet use and behavior more generally?

## REDIRECT EXAMINATION

- BY MS. WERNER:
- 12 Good afternoon now, Dr. Greenfield.
- 13 Good afternoon. Α.
- You were asked on cross-examination about your expertise 14 15 and speciality in addiction. What is it about your expertise in Internet addiction that qualifies you to share thoughts on 16 17
  - A. Because you can't understand the abuse or addictive use of substance or behavior without understanding the behavior or the substance. That would be like saying you could treat cocaine addiction without understanding the pharmacology or neurobiology of how cocaine addiction operates. So it is essentially to understand the subject matter of what it is that people are becoming addicted to or even overusing or abusing, which is really where things are moving.

- Q. And has your research examined the difference between

  Internet use and Internet addiction and the commonalities of
- 3 behavior between a general user and an addicted user?
- 4 A. Yes.
- Q. You were asked on cross-examination about the focus of your writing on Internet addiction. Have you written, generally, on the ideological and neurobiological aspects of Internet use in
- 8 your peer-reviewed articles?
- 9 A. Yes, I have. And I have given a lot of lectures on that 10 subject.
- Q. You were asked on cross-examination about the fact that you don't have a medical degree. Does your training as a
- 13 psychologist prepare you to testify about addiction?
- 14 A. Absolutely.
- Q. What part of your training prepares you to testify about addiction?
- 17 A. Well, my coursework, my clinical experience, my board
  18 certification, my advanced training, my fellowship, my
- certification, my advanced training, my fellowship, my
- 20 experience in addiction medicine so, yes. You don't have to be

internship. I mean, I have both a significant amount of

- 21 a medical doctor to be an expert in addiction medicine or
- 22 addiction.

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- Q. Is it common for psychologists to have an expertise in
- 24 | addiction?
  - A. As common as it is, it is probably more common among

Greenfield - Redirect

- 1 psychologists as well as other mental health professionals.
- 2 | The addictionology field and addiction medicine field is an
- 3 | interdisciplinary field so the American Society of Addiction
- 4 Medicine has got members that are psychologists, psychiatrists,
- 5 some are general docs, some are social workers. It is really a
- 6 | wide range of professionals that practice addiction medicine.
- 7 Q. During your 20 years on the faculty of the University of
- 8 | Connecticut, what school and department did you serve in?
- 9 A. In the School of Medicine in the Department of Psychiatry.
- 10 | Q. And what did you teach there?
- 11 A. I taught addiction medicine, I taught Internet addiction --
- 12 courses in Internet addiction. I taught courses in sexual
- 13 medicine and sexual addiction. And, I supervised third-year
- 14 residents.
- 15 | Q. You were asked on cross-examination about disagreement in
- 16 the field about the appropriate labeling for Internet addiction
- 17 or Internet compulsion, Internet use disorder.
- 18 | A. Yes.
- 19 Q. Does this disagreement in the field mean there is
- 20 disagreement about whether addiction -- I'm sorry, whether the
- 21 Internet is being abused and whether there is a phenomenon of
- 22 | Internet abuse?
- 23 | A. I don't think there is a huge amount of disagreement in the
- 24 professional addiction community that the Internet can be an
- 25 addictive experience and that people are experiencing addiction

- to it. I do think there are disagreements with regard to the nosology, the labeling, and a little bit to what criteria go into the equation to decide whether someone is addicted or not, but I don't think the root concept of whether Internet addiction or some variation of that exists is really up for debate at this point. It has been accepted.
- Q. Can you define the term "nosology"?
- A. Labeling, like the way you would label a diagnosis or a syndrome or condition.
- Q. Is it unusual for there to be some disagreement about labeling or nosology in a behavioral -- give me one second -- in a behavioral science field?
- A. Actually, medicine is one of the most inexact fields you could find. There is disagreement with everything including surgical procedures.
- Q. What is the basis for your belief that in 2022 many or most people are abusing the Internet?
  - A. Well, I don't know if -- I mean, abuse is a value-laden term so I would say overusing, in the sense that everyone is complaining about it and the statistics, the surveys that have been done long since mine are showing that large numbers of people feel like they're overusing their devices and they wish that they could use it less. Whether that meets the criteria where they need help or not -- I mean, most people don't get help, they just live with whatever they're doing and either

Greenfield - Redirect

complain about it or suffer whatever consequences come about as a result of it. The average user in America right now is probably pushing three or four hours and in some cases the numbers are going up to seven or eight hours and those numbers have increased by 15 percent since the pandemic. If you add up the number of hours that the average person spends online — if you spend three hours a day online and you sleep eight and you start as a kid and you live into your 80s, you are going to spend 10 years of your life on the Internet.

Q. You spoke about smartphones. Are you aware of any mechanism on smartphones that have been developed to help people control their Internet use?

A. Yes. There are apps built into the operating system and

- there are aftermarket apps, I have worked with some of them.

  We employ an IT person in our clinic who helps people install those. They're helpful. And they can limit it. The big part with the smartphone is you have it in your pocket or your pocketbook.
- Q. You are not suggesting that you can make a diagnosis of everyone in the world as an Internet addict, are you?

  A. I think it would be grandiose of me to say everybody in the world is an Internet addict. I think -- I think it is a

reasonable statement to say that we are overscreened and overwired and that there are some consequences to that and there have been some severe, significant consequences as a

- result of excess social media use that are not helping not just the individuals, but society.
  - Q. You were asked on cross-examination about the self-assessment that is included in your more recent book.
  - A. Yes.

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- Q. To be clear, do you use a self-assessment or a quiz in your clinical practice?
  - A. No, because the self-assessment is just what it is, these are tools that people use themselves and the disclaimer on the tool is that they should not rely on that as a sole indicator as to whether they have a problem or not, that it needs to be confirmed by a mental health or addictions professional.
  - Q. And what is the audience for your more recent book?
- A. Well, that's a good question. I have no idea. I mean, I wrote it the reality is that the people who buy books on mental health or addiction are not the people who have the problems, they're usually family members or loved ones or interested parties who then try to impart that information to

the addict. Very few people who have a problem seek out the

- 20 book.
- 21 | Q. But is that an academic text?
- 22 | A. What is?
- 23 | Q. Your more recent book, Internet use -- I'm sorry.
- A. I mean they're all based on some of my original studies but they've been updated. They've not been re-normed. There are

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- in other words tests that have been published. I haven't done that.
  - Q. What is the audience for your peer-review journals on the subject of Internet use and behavior?
  - A. Other professionals. And the book also, my expectation was that professionals would buy it and use it.
    - Q. You were asked about your 1999 survey and the fact that participants self-selected into that survey. Is that common in behavioral science research?
- 11 A. All behavioral science research people are self-selected.

So there is an inherent bias in all behavioral science research that somebody who agrees to participate has some potential for bias. You have to sort of include that in your analysis and just take that for granted as part of the nature of doing that kind of research. There is no way to objectively examine or experiment on people without their knowledge or their agreement.

- Q. Can you give any other examples of behavioral science research studies where participants self-report or self-select, other types of fields?
- A. You mean in behavior? I mean, certainly most of psychology research and psychiatry research are self-selected. Even evaluations of responses to medications people self-selected, they agree to participate in the study and, in fact, in some

- cases they get paid for participating in the study or they get free treatment. So that's the nature of all human subject research, is self-selection.
- 4 Q. Did you pay the participants in your '99 study?
- 5 | A. No.

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- Q. And is it generally accepted in the field of psychology to use this self-reporting mechanism research in a study of this sort?
- 9 A. There are studies that people are paid. I can't tell you what percentage.
- Q. Sorry, just to clarify, I'm not asking about paying
  participants, I am asking about self-reporting. Is it standard
  to rely on self-reporting and self-selection in a behavioral
  science survey?
- 15 A. Yes. It's very, very common.
- 16 Q. And is that generally accepted in the field?
- 17 A. Yes, but with acknowledgment of the potential for bias.
- Q. You were also asked about the possibility that your survey participants were lying.
- 20 | A. Sure.
- Q. Were there any safeguards in your study to protect against data being skewed by that possibility?
- A. Yes, there were some statistical tests that were put into
  the analysis that would look for in -- what's the word -response patterns that would reflect lying -- and this is way

beyond my pay grade because this involved some very sophisticated statistical analysis — and then also people that would repeat things and people that would respond too affirmatively or too negatively, all that data was thrown out. So I don't know, about 1,500 subjects or so were thrown out because we thought there was a high likelihood that they were lying or misrepresenting themselves. We can't guarantee that nobody snuck in, but we did try.

- Q. And did you partner on that study with a statistician whose pay grade that was not beyond?
- A. Yes. In fact, I think she did get paid for doing the statistical analysis.
- Q. You also discussed the large sample size of that study.

  Did the large sample size help to address the possibility that

  lying might have skewed the results?
  - A. Yes. The larger the sample, the more valid your conclusions are because you average out the error, you decrease the error, and increase the power of the study. So, you know, if you have a study of 20 subjects, that error can be very skewing but when you have 1,700, that error gets spread out throughout that data set.
  - Q. I believe you testified that around 6 percent of the respondents to that study seems to be overusing the Internet?
- A. Well, they met the criteria of what I defined then as addicted or -- we use the word compulsive at the time -- it was

- about 5.9 percent, which that statistic is pretty consistent to what people find today.
- Q. Would you expect that number to be higher if your data set was skewed by the phenomenon of self-reporting by lies?
  - A. I don't know what incentive there would be for someone to lie about a negative circumstance but I suppose it's possible.
    - Q. You were asked on cross-examination about the phenomenon of lying on the Internet and the reasons why people lie. You were asked whether people lie in order to be in better stead with the people they're lying to. Do you remember that?
- 11 A. Yes.

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- Q. Are you familiar with cases involving dynamics such as age play?
- 14 | A. Yes.
- 15 | Q. And are you familiar with online fetish?
- 16 | A. Oh yes.
- Q. And are you familiar with online fetish spaces where people disclose criminal behavior and criminal fetishes?
- 19 | A. Oh yes.
- 20 MS. RAVENER: Objection.
- 21 THE COURT: Thank you.
- 22 You can go ahead and answer the question,
- 23 Dr. Greenfield.
- 24 THE WITNESS: Yes. I was asked to comment on such a 25 case, actually that was in New York.

1 BY MS. WERNER:

- 2 Q. In cases of that nature, do people disclose lies that
- 3 others might find reprehensible or even criminal?
- 4 | A. Yes.
- 5 Q. Why might they do that?
- A. Because they feel that it might be valued within the community that they're revealing that information. In other
- 8 words, it increases their cred within that world.
- 9 Q. So in a world where the fetish is about something that
  10 would in the common space be deemed reprehensible, someone
- 11 | might be held in higher stead by admitting --
- 12 A. Yes. That's correct.
- MS. WERNER: Brief indulgence?
- 14 | THE COURT: That's fine. Please take your time.
- Q. You were asked on cross-examination about lies that people

tell in their everyday life. Do you have a sense that there is

- 17 | a different sort of lying that can occur online?
- 18 I can rephrase.
- 19 A. Yes, please.

- Q. Are people able to lie about things online that they cannot
- 21 get away with lying about in real life?
- 22 | A. Yeah, I would believe so, because there is no validation
- 23 | checks. I mean, ultimately, if you lie about, you know,
- 24 whether you wear glasses or not and then you meet the person,
- 25 you will know whether they wear glasses or not. Online you may

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- never meet the person, you may never see them, you may never
  talk to them, you may never have any way to validate or
  invalidate what they're saying.
  - Q. So does that mean that online it is possible to role play identities that are more different from your own?
  - A. Yes. I believe so.
  - Q. You were asked on cross-examination about your reliance on your personal experience as a factor. Is that all you rely on when you are drawing your academic conclusions?
  - A. No. I just use myself as one of the many. I certainly don't base my research conclusions on myself, that would be not a smart idea. Although, I do miss my smartphone right now which I had to give up downstairs.
  - Q. You were provided with a definition of disinhibition on cross-examination. Do you remember that?
- 16 | A. I do.
  - Q. Have you also written that disinhibition seems to allow users to express and experience themselves in a manner that is less affected by ego constraints allowing them to take on alternate persona, roles, or behaviors?
- 21 | A. Yes. I believe I wrote that.
- 22 | Q. Do you recall writing that in a peer-reviewed journal?
- A. I don't know where I wrote it but it sounds like something
  I would write.
  - Q. Would it refresh your recollection to see a copy of the

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- 1 | article where you state that?
- 2 | A. Sure.
- 3 | Q. You have a binder in front of you.
- 4 | A. I do.
- 5  $\mathbb{Q}$ . Directing you to the tab DG-4.
- 6 A. OK. What page?
- 7 | Q. I apologize, DG-3.
- 8 | A. OK. Got it.
- 9 Q. Do you recognize this article?
- 10 A. Yeah. This just came out last year.
- 11 | Q. And I am directing you to page 101 which is the third page.
- 12 | A. OK.
- Q. I am directing you to the bottom of the page where there is
- 14 | the direction of disinhibition.
- 15 | A. Yes.
- 16  $\parallel$  Q. Do you recall now publishing this recently in a
- 17 | peer-reviewed journal?
- 18 | A. I do.
- 19 Q. And so thank you, you can put your binder down.
- 20 So disinhibition, you were asked on cross-examination,
- 21 | whether that allows people to reveal their truest selves but it
- 22 seems that disinhibition is also a phenomenon that allows
- 23 people to role play more easily; is that right?
- 24 A. Yes. Whether you could -- yes, the answer is yes, and I
- 25 | can't tell you whether that's their true self or their less

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- truer self, but yes, I think they're freer to experiment with 1 aspects of themselves that they wouldn't ordinarily be able to 2 3
- Q. At its broadest level, would you say that disinhibition is 4 5 the freedom to say things you would not necessarily say in real
- life? 6

do.

- 7 That's the definition of it. Yes.
- 8 Would that include role-playing roles that are edgy or 9 transgressive?
- 10 Α. It could and often does.
- 11 MS. WERNER: Brief indulgence?
- 12 THE COURT: That's fine. Please take your time.
- 13 Dr. Greenfield, you were asked on cross-examination about 14 meeting with Ethan Melzer.
- 15 Α. Yes.
- 16 Did you meet with Ethan Melzer because you were asked to 17 evaluate him?
- 18 Α. No.
- 19 Were you asked to diagnose him? Q.
- 20 Α. No.
- 21 Have you been asked in this case to opine, in any way, on Q.
- 22 Ethan Melzer's culpability?
- 23 Α. No.
- 24 Have you been asked in this case to give any opinion about
- 25 whether he is addicted to the Internet?

Greenfield - Redirect

- 1 A. No.
- 2 | Q. Have you been asked to give any opinion on whether Ethan
- 3 Melzer, in particular, experiences the behavioral dynamics that
- 4 we have spent so much of today discussing?
- 5 | A. No.
- 6 Q. But you did meet with Mr. Melzer?
- 7 | A. I did.
- 8 Q. And you were asked about a specific conclusion; the
- 9 conclusion, I believe, was that he was a stupid kid who was in
- 10 | over his head?
- 11 | A. Yes.
- 12 | Q. What else did you conclude about Mr. Melzer from meeting
- 13 | with him?
- 14 A. I thought that he was an intelligent guy who lacked a lot
- of self-esteem -- these are my impressions -- and that he was
- 16 using the chats as a means to kind of show off, almost, to kind
- 17 | of belong to something. I have no idea whether he believed
- 18 | them or not or what he knew or didn't know, but I know that he
- 19 | seemed way over his head in terms of what he was doing.
- 20 | Q. Have you been asked to share that testimony at a trial in
- 21 | this case?
- 22 A. Not at this point. No.
- 23 MS. WERNER: No further questions.
- 24 THE COURT: Thank you.
- 25 | Counsel for the United States?

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1 MS. RAVENER: One moment, your Honor? 2 THE COURT: Thank you. Please, take your time. 3 (Counsel conferring) 4 MS. RAVENER: Your Honor, we have no further questions 5 for this witness. 6 THE COURT: Thank you. 7 Dr. Greenfield, thank you very much for your 8 testimony. You can step down. 9 THE WITNESS: Thank you. 10 (witness steps down) 11 THE COURT: Counsel, first, thank you very much for 12 doing all of that good work in the amount of time that we had 13 to do it. I appreciate very much the clear attention to the 14 issues here that both parties put into the presentation of 15 Dr. Greenfield's testimony here. The issue is fully submitted. I am happy to take this under advisement and I will try to rule 16 17 on it well in advance of trial. 18 There are also a number of pending applications to the Court that were submitted to me recently. I will try to take 19 20 those up promptly, too. I expect to see you all here on the 21 27th. I don't know if I am going to be in a position to rule 22 on this motion by then but I can tell you that I will do my 23 best to put ourselves in a position to resolve the issue

regarding the admissibility of Dr. Greenfield's testimony

sometime next week, that is, in advance of trial. If not on

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the 27th, then perhaps later. I actually expect to enter an order later today just to set a placeholder conference for Friday the 1st in the event that there is any work that we have not completed by that date so we can take it up. You will see that order issued later today.

Counsel, I don't want to invite plenary argument regarding Dr. Greenfield's testimony. Again, the issues have been well-presented to me by the parties. I expect to resolve them based on the evidence that was presented here. I have one just slightly interesting to me question that I would just like to hear your views on.

There are suggested, in some of the questions by the United States, namely related to Dr. Greenfield's qualifications to testify in the areas of -- I will call it -- psychiatry, neurology, and evolutionary biology. There are a number of points of his proposed testimony where he speaks about the effect of dopamine on the brain, he talks about scan studies which, as counsel for the United States pointed out, he did not himself conduct. So I would just like to hear from each of you briefly, counsel, about your views as to Dr. Greenfield's qualifications to testify as to such topics. I should say, except for purposes of this conversation, that I will conclude that he is qualified as a clinical psychologist as a general matter, although I haven't yet made that determination, but I would just like to hear from you about

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whether and to what extent his experience and expertise and educational training qualify him to testify about neurology and, in particular, I will call it biological underpinnings of the human brain that were the subject of a portion of his testimony. Let me hear first from counsel for defendant.

MS. WERNER: Thank you, your Honor.

I believe his testimony supports the fact that both his training and his practice have prepared him for such testimony. So during his own educational studies and his Ph.D program he undertook a study of addiction. He testified that these concepts are fundamental to the study of addiction psychology and that they're generally accepted in the field of addiction psychology. He also testified about a fellowship that he completed subsequent to his Ph.D in the field, specifically, of psycho-pharmacology. Your Honor, he also testified about his own academic experience including 20 years on the faculty of the University of Connecticut School of Medicine in the Department of Psychiatry which he was qualified to do because of the close relationship between the fields of psychology and psychiatry, as well as his own extensive experience practicing as a psychologist in a hospital setting. And so, your Honor, I think there is no doubt on this record that Dr. Greenfield is qualified to render testimony on that subject based on his own training and experience.

In terms of the scan studies specifically, he

testified about having reviewed those and how those are commonly relied upon in the field of addiction medicine which, although he is not a medical doctor, he is an expert in this field of addiction, certainly.

THE COURT: Thank you.

Counsel for the government?

MS. RAVENER: Thanks, your Honor.

Your Honor, may I remove my mask to address the Court?

THE COURT: You may if you take the podium.

MS. RAVENER: That's fine. I will leave it as is.

Your Honor, defense counsel's argument betrays one of the foundational problems with Dr. Greenfield's proposed testimony in this case which is the focus on addiction. There is no direct link as required under the rules and under Daubert analysis to show that any testimony about any kind of addiction, Internet or otherwise, has any place in this trial. To the extent that Dr. Greenfield is basing his testimony regarding the biological underpinnings or activities of the human brain on that school of science, it's inapposite as applied to this case and so we believe that he is not qualified to talk about those things in the context of this case and as applied to these facts. The logical conclusions that he has presented and drawn here are untethered to the science and to his experience and qualifications. In addition, while it may be permissible for him to speak about his review of the

literature and studies conducted by others, if he truly had expertise in that area we don't believe that it has been established and that the defense has met their burden to show that he has those qualifications. He did not name a single study that he was relying on so we cannot discern whether he is relying on one study, multiple studies, what those studies are so that they can be independently reviewed, and so that the Court can be assured that he is not simply repeating hearsay from a single study. Moreover, whether those studies were conducted in the context of addiction science would also be an issue that would undermine his qualifications to address them in the context of this case where, by his own account, he cannot say any Internet addiction is present or relevant.

THE COURT: Thank you.

Any response to that line of argument, counsel for defendant?

MS. WERNER: Very briefly, your Honor.

THE COURT: Please.

MS. WERNER: I think that the testimony could not be clearer that Dr. Greenfield's expertise in addiction gives him a unique qualification to share his conclusions about Internet use more generally, in addition to the fact that he has spent a great deal of time researching and comparing the behaviors of people who simply use the Internet to the behaviors of people who abuse them. In addition, your Honor, I believe his

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testimony about the scan studies was that the scan studies show the affect of dopamine in the brain not only for those who suffer from addiction but also those who are just receiving a dopamine hit in the part of the brain that is receptive to the neurotransmitter dopamine.

THE COURT: Thank you.

I did not invite plenary argument on this but since counsel for the United States raised it, counsel for defendant, how do you respond to the argument presented by counsel for the United States that testimony regarding addiction here doesn't fit with this case, in other words, that there is no support for the conclusion that Mr. Melzer or anyone else involved in the offense was an Internet addict, whatever that means.

MS. WERNER: Yes, your Honor. Thank you.

The testimony about Internet addiction is relevant in as much as it provides context for Dr. Greenfield's testimony about individual and group behavior on the Internet generally, and it so happens as a result of his focus on addiction that some of the research he has conducted on individual behavior, the individual behavior of Internet users is framed in the context of a comparison with Internet addicts. There is no question that his testimony about Internet use, generally, is extremely relevant to this case which turns entirely on an evaluation of the behavior of a set of individuals in an online chat room. And so, if Dr. Greenfield can provide context for

how people generally behave in large numbers online and to set that in the context of his expertise as an Internet addiction psychologist, that is extraordinarily relevant and useful to the jury.

THE COURT: Thank you.

Let me just make sure I understand the defense's position here. As I understand it, you are not planning to introduce the testimony of Dr. Greenfield regarding Internet addiction in order to suggest that Mr. Melzer or any of the co-conspirators — alleged co-conspirators were Internet addicts. Instead, as I understand it, the testimony about addiction is expected to frame Dr. Greenfield's testimony about broader Internet use generally.

Is that fair?

MS. WERNER: That's correct, your Honor. And there is one other way in which it is relevant and that is his expertise on Internet addiction and his expertise on the neurobiology of addiction more generally, including its basis in evolutionary biology enables Dr. Greenfield to explain how the Internet affects the human brain including the brain of an Internet user, a general user who has not been diagnosed with Internet addiction. He testified about the way that dopamine affects the brain, for instance, when someone uses cocaine for the first time or when somebody encounters gambling or sex or any other behavior that causes a dopamine hit in the nucleus

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accumbens. So his testimony about dopamine and the brain is relevant to our discussion of Internet use in a general way, separate and apart from the testimony about addiction and addicts specifically.

THE COURT: Thank you.

I apologize, I don't want to engage in a plenary discussion regarding the briefing but let me just ask, since I have you, counsel for defendant, to the extent that the defense is not arguing that Mr. Melzer or any of the co-conspirators are Internet addicts, and given that Dr. Greenfield is not purporting to opine that they are, what's your view regarding the 403 argument here? Why isn't that confusing -- so confusing to the jury that I should exclude it? The government, in essence, will make the argument -- has made the argument -- I will reframe it -- that your presenting that evidence to the jury suggests to them that they should make some kind of unqualified diagnosis of Mr. Melzer based on the description of what an Internet addict is. And we heard from Dr. Greenfield today that diagnosing someone on that basis would be, in his words, unethical. How do you respond to an argument that presenting evidence regarding Internet addiction and its markers here would be so confusing as to be unduly, I will call it, to outweigh the probative value of the evidence given the possibility of confusing the jurors?

MS. WERNER: Brief indulgence, your Honor?

THE COURT: Thank you. That's fine. Take your time.

(Counsel conferring)

MS. WERNER: Your Honor, I think that the government's 403 arguments rely on a misframing or a misunderstanding of the subjects that Dr. Greenfield will testify about at trial. I believe it will be clear as day at trial that Dr. Greenfield is testifying about Internet addiction only to provide context for his opinions about Internet use and the fundamental science that we have discussed. At trial, his testimony would be far more cabined on the issue of Internet addiction which we needed to flesh out today for the purposes of this hearing. The government would also have the ability to vigorously cross-examine him about what he can and cannot say on the subject matter, but certainly it would be more cabined even at the stage of direct examination. We are not proposing that he will testify about an Internet addiction on the part of Mr. Melzer or any other actor in this case.

THE COURT: Thank you. Good.

Do you anticipate that on direct examination he would talk about diagnosing Internet addiction or any of the markers for Internet addiction that were the subject of some of the questioning here today?

MS. WERNER: No, your Honor. I think that testimony is largely relevant in response to the government's arguments about his ability to testify in general.

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would violate the rule.

THE COURT: Good. Thank you. That's helpful.

Counsel for the United States, any response?

MS. RAVENER: Yes, your Honor. First of all, any
testimony about Internet addiction, we believe, would run afoul
of Rule 403. The hearing here today confirms that this is a
notion of an unapproved alleged disease that has no bearing on
the facts of this case. To put that before the jury at all is,
in and of itself, a problem under Rule 403 and, we believe,

In addition, the major issue with doing that and with Dr. Greenfield's testimony at large is that he has drawn opinions and conclusions about the clouding of a person's judgment, about the voluntariness of their behavior, about the likelihood of them lying or engaging in fantasy that are wholly unrooted in any scientific comparison, that could reasonably be relied upon any expert in the field let alone by him, and to the extent his alleged views of the science, that is, the movement of dopamine in one's body or a person's biological reactions to Internet use is drawn or derived from the setting of addiction. That is drawing even further logical leaps and assumptions that he just simply has not set forth and the defense has failed to meet their burden to set forth a reliable basis for.

So even if it were to have some marginal relevance which we submit it actually does not, his testimony here today

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demonstrates that those opinions and those conclusions are not adequately supported by reliable methods and lack a reliable basis in violation of Rule 702 and for those reasons the testimony drawing those conclusions should be precluded.

The defense had ample opportunity to elicit a basis for those opinions from Dr. Greenfield. We submit we did not hear one today and for those reasons the jury should not be left to wonder about how they might apply these various bits and pieces of Dr. Greenfield's purported experience on their own. That's especially true, your Honor, where the defense has expanded Dr. Greenfield's alleged scope of expertise to all Internet use and all Internet behavior which is just simply not an appropriate subject for expert testimony, certainly not in this case.

The testimony here today has established what I think we can all use our common sense to know, that the jury pool is going to be highly likely to be very familiar with the use of the Internet and their own lives, it has been common practice for all of us to use the Internet for more than 25 years and people use it regularly — I believe Dr. Greenfield's own testimony was something more than 90 percent or almost everyone. This is not an area that the jury needs instruction on. It does not matter to any fact in issue and it will not help the jury assess any evidence presented in this case to know whether or not dopamine affects the brain or to know the

evolutionary biology that Dr. Greenfield believes might be applicable to every time each and every one of us uses the Internet. There is just no application for that on these facts and on this evidence.

THE COURT: Thank you.

Counsel for defense, any response?

MS. WERNER: Yes. Thank you, your Honor.

First, I do disagree with the government's characterization of whether or not we met our burden today and with their characterization of our notice which I believe firmly included the testimony that he is going to give at trial. But more importantly, your Honor, I think it is important not to lose sight of the fact that, repeatedly, Courts in this district have admitted testimony by psychologists like Dr. Greenfield that is informed largely by clinical practice, by qualitative interviews, synthesis and interpretation, and there are numerous examples where Courts in this district have admitted testimony of that nature. And so, I think when Dr. Greenfield testifies that he sees patients in his clinical practice experience the clouding of their judgment, that is valuable and that is admissible.

Turning, your Honor, to the subject matter of the dopamine and the neuroscience, it is relevant in as much as it helps frame his understanding of these individual behaviors;

Dr. Greenfield's understanding of the behaviors that he has

seen in survey respondents, in surveys conducted by colleagues, as well as patients in his own practice. It is impossible to fully appreciate how he developed those theories and confirmed them without understanding their rooting in this evolutionary biology and neuroscience. Certainly it is not the main focus of his testimony, nor is addiction, but it's a useful framing for the jury to hear about, at least briefly.

THE COURT: Good. Thank you very much.

So again, thank you very much, counsel, for the time and the careful presentation of evidence here. It was very helpful for me so thank you for doing that work. I look forward to seeing you all back here on the 27th and we will take up issues related to the voir dire process.

Counsel, anything else that either side would like to raise with me before I step down, first counsel for the government?

MS. RAVENER: Your Honor, we don't have anything to raise but we would ask for the Court's permission to stay present in the courtroom for a view brief moments with the Court's staff and defense counsel so we can confer about some additional matters.

THE COURT: Thank you.

MS. RAVENER: I'm sorry, your Honor. One moment? And we would ask the defendant to remain for that as well.

THE COURT: Thank you.

Counsel for defendant, anything else that you would like to raise with me before I step down?

MS. WERNER: No. Thank you, your Honor.

THE COURT: Good. Thank you.

Yes, I'm happy for the parties to remain in the courtroom after I step down, and subject to the availability of the marshal's service.

Thank you all again for your work. I will see you Monday.

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